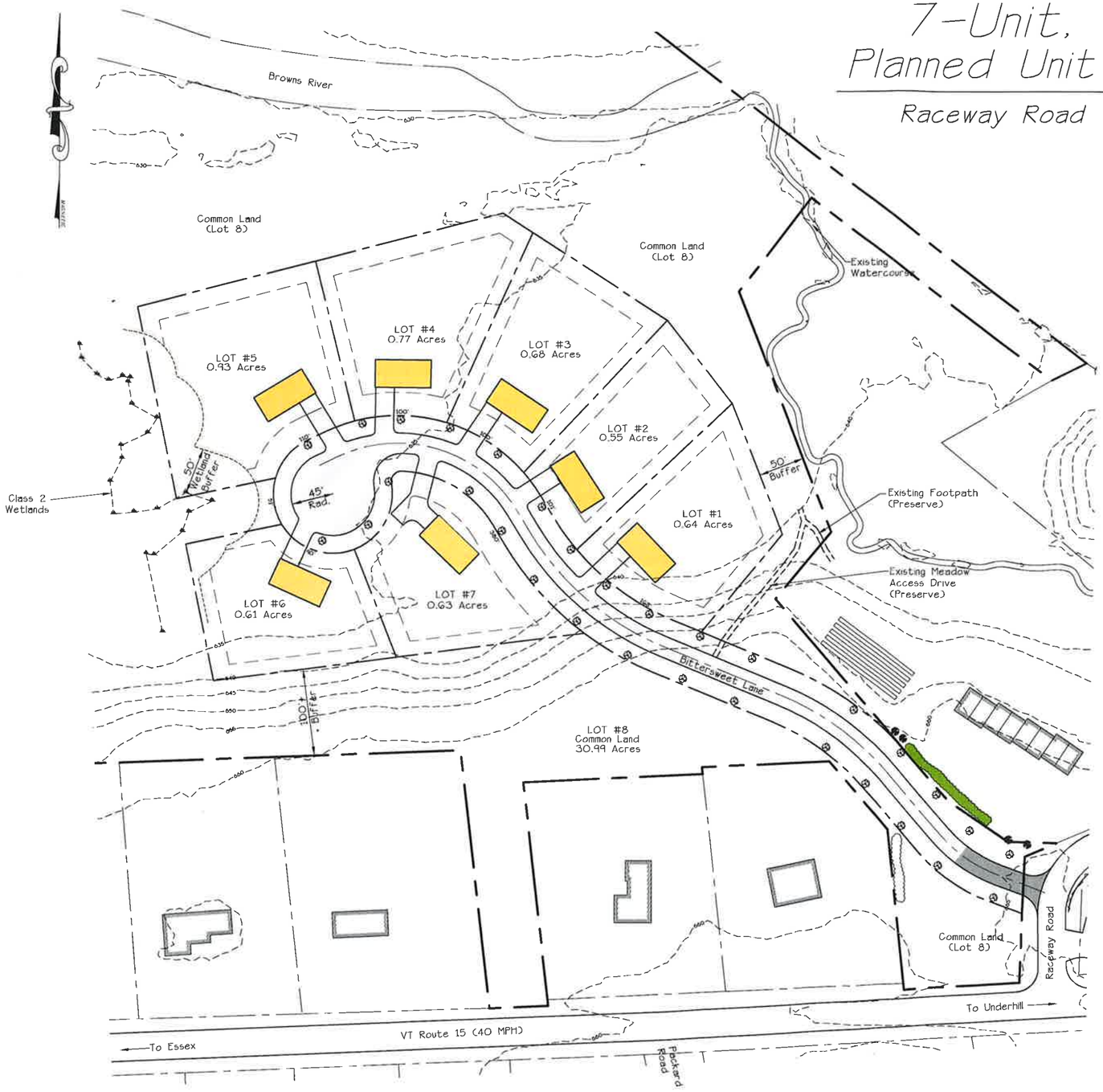
STAFF

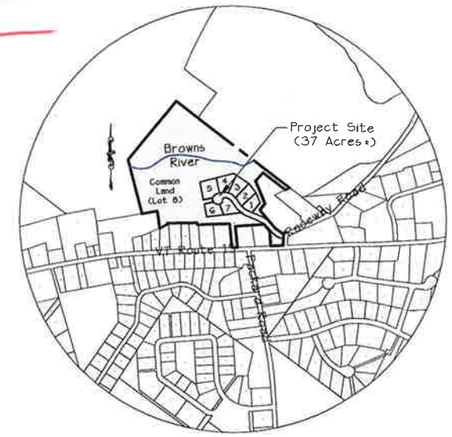
7-Unit, 8-Lot
Planned Unit Development

Raceway Road Jericho, VT



GRAPHIC SCALE

(IN FEET)
1 inch = 60 ft.



LOCATION MAP

Jericho, VT N.T.S.

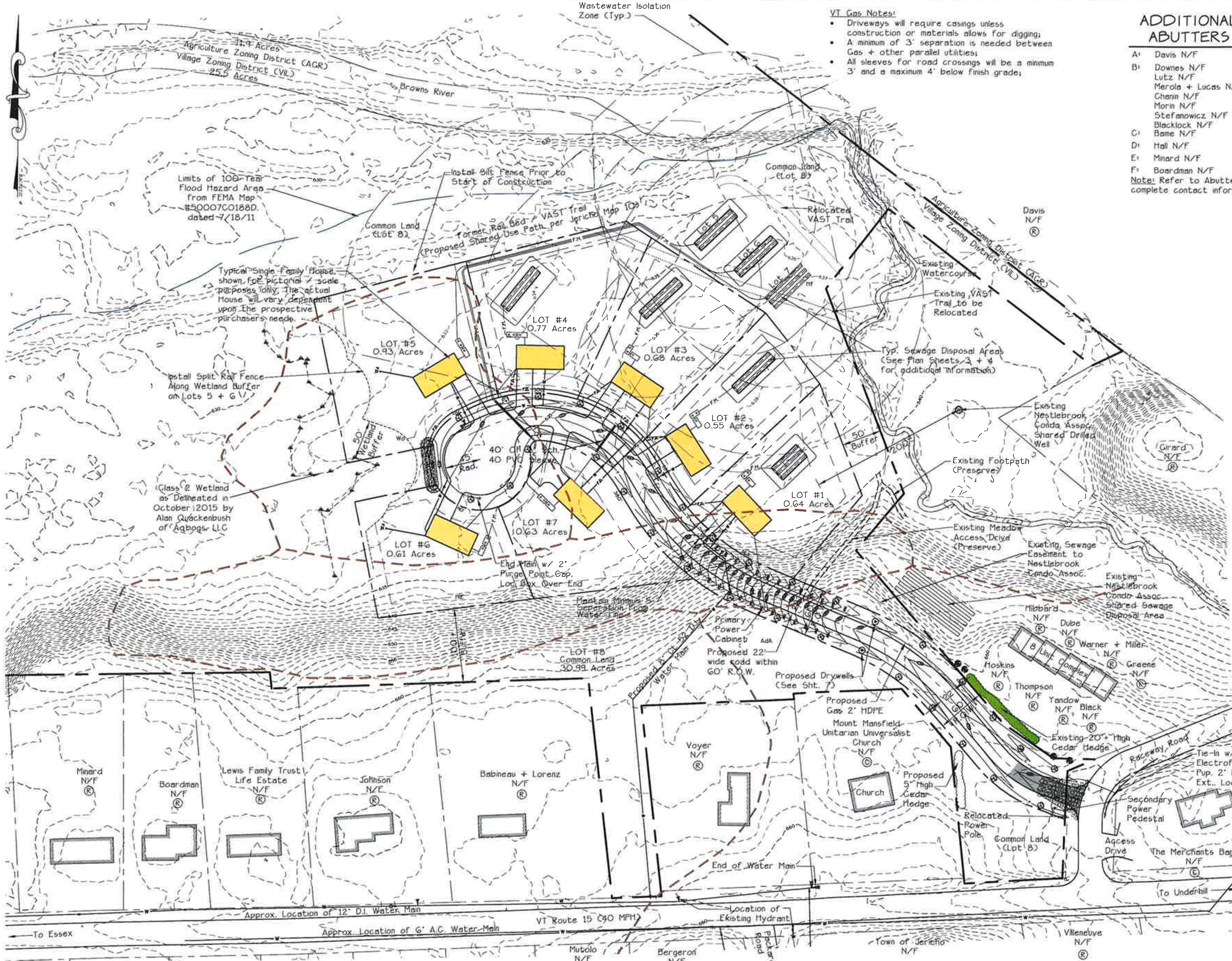
PLAN SHEET LIST

Owner:
Stephen + Frances Boucher Living Trust
733 N. 65th Street
Mesa, AZ 85205

Applicant:
Great Northern Development, LLC
(c/o Josh Girard)
11 Raceway Road
Jericho, VT 05465

Consultant:
O'Leary-Burke Civil Associates, PLC
13 Corporate Drive
Essex Jct., VT 05452
(802) 878-9990

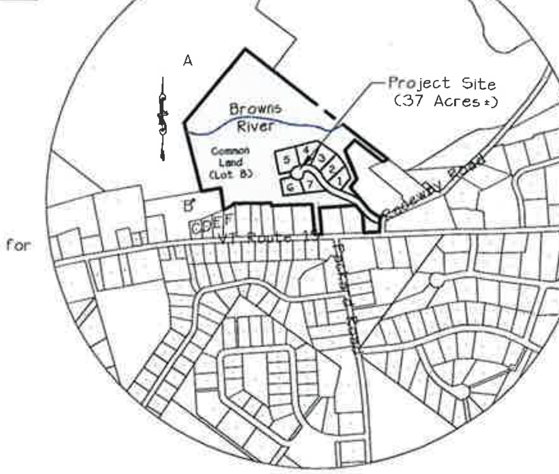
VT Gas Notes:
- Driveways will require casings unless construction or materials allows for digging;
- A minimum of 3' separation is needed between Gas + other parallel utilities;
- All sleeves for road crossings will be a minimum 3' and a maximum 4' below finish grade;



ADDITIONAL ABUTTERS

A: Davis N/F
B: Downes N/F
Lutz N/F
Merola + Lucas N/F
Chanin N/F
Morin N/F
Stefanowicz N/F
Blacklock N/F
C: Bame N/F
D: Hall N/F
E: Minard N/F
F: Boardman N/F

Note: Refer to Abutters List for complete contact information.



LOCATION MAP

Jericho, VT N.T.S.

Legend

— - —	PROJECT BOUNDARY
———	PROPERTY LINE
— — —	SIDELINE OF EASEMENT
--665--	CONTOUR LINE (USGS DATUM)
—665—	PROPOSED FINISH GRADE CONTOUR
︶︶︶	EDGE OF WOODED AREA
⊗	TYPICAL STREET TREE
✖	STREET LIGHT
—F.D.—	FOOTING DRAIN
⊙	DRYWELL
—W—⊳⊲—	WATERLINE W/ GATE VALVE
—F.M.—	FORCEMAIN

Soil Types

AdA	ADAMS + WINDSOR LOAMY SANDS, 0-5% SLOPES
HF	HADLEY VERY FINE SANDY LOAM
HE	HARTLAND VERY FINE SANDY LOAM, 25-60% SLOPES
Wu	WINOOSKI VERY FINE SANDY LOAM

Zoning Information

Parcel ID#: RW003 (37± Acres)

Zoned: Village (VIL; 25 Acres±) + Agriculture (AGR; 12 Acres±)

PUD Dimensional Requirements:

	Village	Agriculture
Minimum Lot Area:	0.33 Acres	0.50 Acres
Min. Road Frontage:	50 FT	75 FT
Setbacks:		
Front:	15 FT	25 FT
Side:	10 FT	15 FT
Rear:	20 FT	20 FT
Buffer Zone:	50 FT	100 FT
Max. Lot Coverage:	40%	30%
Proposed Coverage:	3.0% (1.10 Acres)	
Max. Structure Height:	34 FT	34 FT
Max. Density:		
1 Single Family Unit/ Standard Min. Lot Area	25 Units	1 Unit (7 Units Proposed)

Owner:
Stephen + Frances Boucher Living Trust
733 N. 65th Street
Mesa, AZ 85205

Applicant:
Great Northern Development, LLC
(c/o Josh Girard)
11 Raceway Road
Jericho, VT 05465

Notes:
1.) This Plan is not to be used for Property Conveyance. See "Subdivision Plat, Portion of Lands Owned By The Stephen and Frances Boucher Living Trust" prepared by O'Leary-Burke Civil Associates, PLC, dated 4/18/16 for detailed lot information and property conveyance;

2.) Refer to Plan Sheet 3 for Building Elevation information;

3.) While footing drains via sump pumps are shown to address groundwater, the Developer/Building Contractor is solely responsible to take appropriate measures to ensure dry basements;

GRAPHIC SCALE
(IN FEET)
1 inch = 60 ft

THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.

DATE	
SURVEY	OBCA
DESIGN	OBCA
DRAWN	PFH
CHECKED	DWB
SCALE	1" = 60'

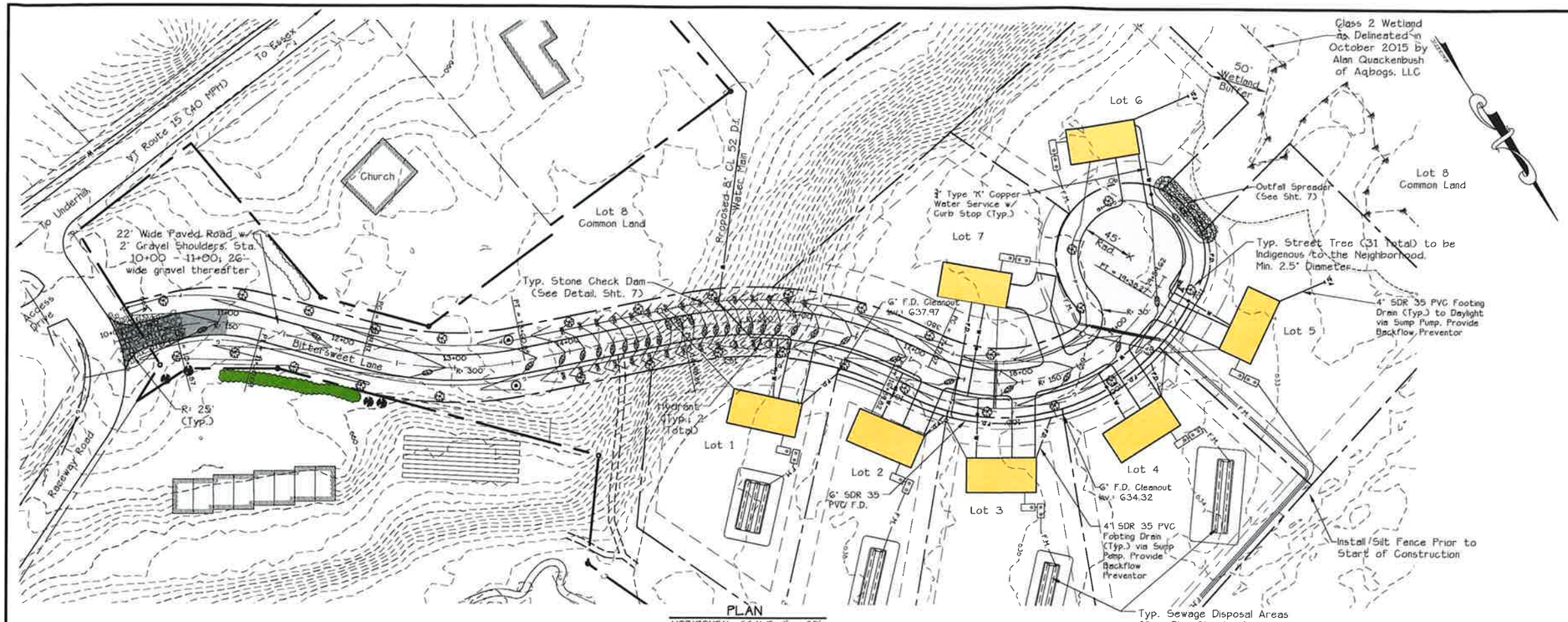
REVISION
☐ RECORD DRAWING ☐ PRELIMINARY
■ FINAL ☐ SKETCH/CONCEPT

O'LEARY-BURKE CIVIL ASSOCIATES, PLC
13 CORPORATE DRIVE
ESSEX JCT., VT
PHONE: 878-9990
FAX: 878-9989
E-MAIL: obca@olearyburke.com

A Planned Unit Development
VT Route 15 / 3 Raceway Road - Jericho, VT

Site Plan

BY	
DATE	3/20/16
JOB #	2015-61
FILE	2015-61-S1
PLAN SHEET #	1

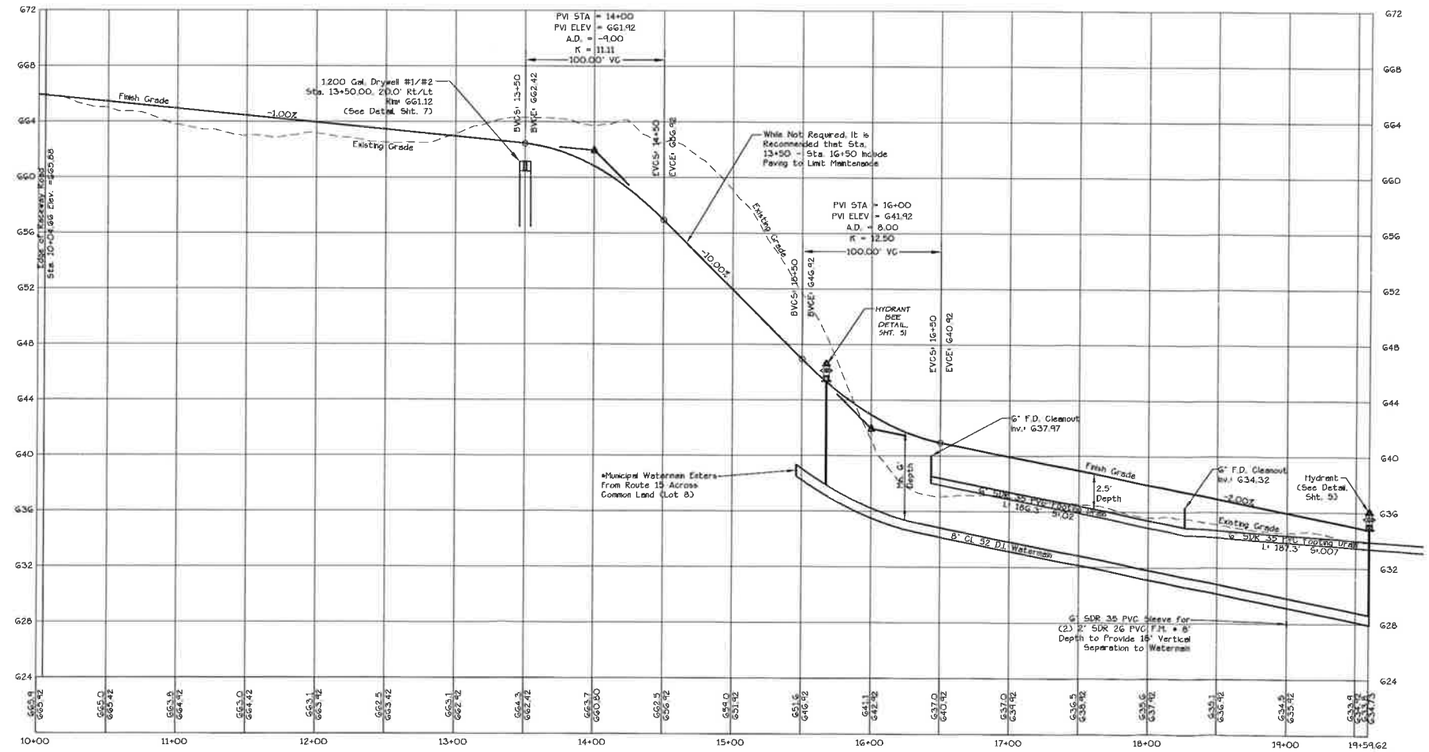


PLAN
HORIZONTAL SCALE: 1" = 50'

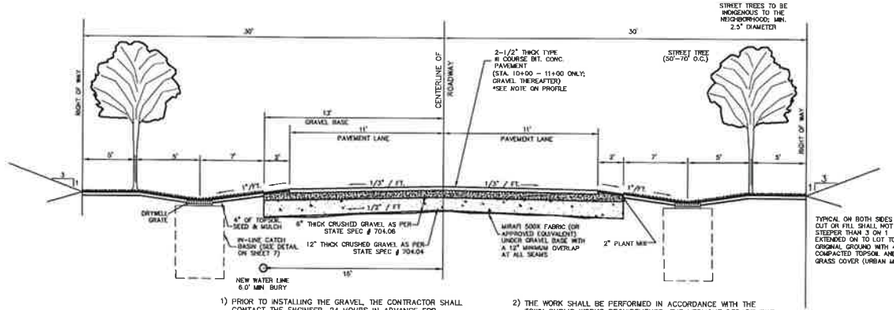
Legend

- PROJECT BOUNDARY
- PROPERTY LINE
- SIDELINE OF EASEMENT
- 665 CONTOUR LINE (USGS DATUM)
- 665 PROPOSED FINISH GRADE CONTOUR
- EDGE OF WOODED AREA
- TYPICAL STREET TREE
- STREET LIGHT
- F.D. FOOTING DRAIN
- DRYWELL
- W WATERLINE W/ GATE VALVE
- F.M. FORCEMAIN

GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft



PROFILE
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



1) PRIOR TO INSTALLING THE GRAVEL, THE CONTRACTOR SHALL CONTACT THE ENGINEER, 24 HOURS IN ADVANCE, FOR INSPECTION OF THE SUBBASE SOILS. THE CONTRACTOR SHALL FURNISH A LOADED DUMPTRUCK FOR TRAVELLING ON THE SUBBASE WHEN THE ENGINEER PERFORMS THE INSPECTION. THE CONTRACTOR SHALL OVER-EXCAVATE IN UNSUITABLE SOILS AND ADD ADDITIONAL GRAVEL BASE AS REQUESTED BY THE ENGINEER.

2) THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE TOWN PUBLIC WORKS REQUIREMENTS, THE VERMONT DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS AND THE ENGINEERING PLANS AND SPECIFICATIONS.

3) DRIVEWAYS SHALL MATCH SWALE GRADING; 9" BELOW & 9" OFF THE EDGE OF PAVEMENT

ROAD CROSS-SECTION
NTS

Notes:

- Driveways will require Gas casings unless construction or materials allows for digging;
- A minimum of 3' separation is needed between Gas + other parallel utilities;
- All sleeves for road crossings will be a minimum 3' and a maximum 4' below finish grade;
- Power layout to be per Green Mountain Power Standards + Specitions;

THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.

DATE	REVISION	BY

SURVEY: OBCA
DESIGN: OBCA
DRAWN: PFH
CHECKED: DWB
SCALE: 1" = 50'

☐ RECORD DRAWING ☐ PRELIMINARY
■ FINAL ☐ SKETCH/CONCEPT

O'LEARY-BURKE
CIVIL ASSOCIATES, PLC
13 CORPORATE DRIVE
ESSEX JCT, VT
PHONE: 878-6900
FAX: 878-6999
E-MAIL: OBCA@OBrienBurke.com

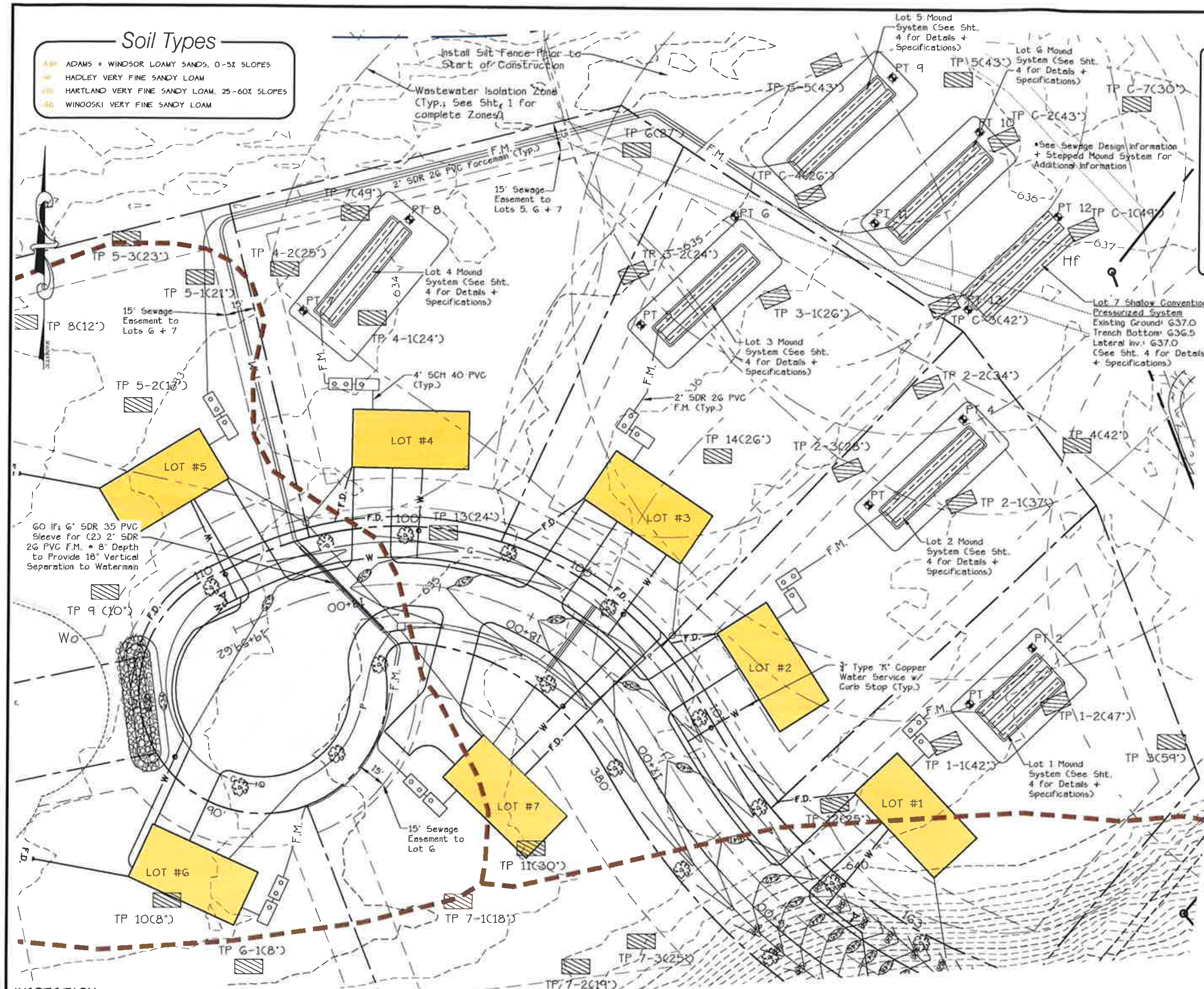
A Planned Unit Development

VT Route 15 / 3 Raceway Road - Jericho, VT

Plan + Profile

Bittersweet Lane

DATE: 3/20/16
JOB#: 2015-81
FILE: 2015-81-S1
PLAN SHEET #: 2



Legend

▬ ▬ ─ ▬	PROJECT BOUNDARY
───	PROPERTY LINE
─ ─ ─	SIDELINE OF EASEMENT
─ ─ 665 ─ ─	CONTOUR LINE (U.S.G.S. DATUM)
── 665 ──	PROPOSED FINISH GRADE CONTOUR
︶︶︶	EDGE OF WOODED AREA
TP-8A	TEST PITS
PT-8	PERCOLATION TESTS
	TYPICAL STREET TREE
	STREET LIGHT
── F.D. ──	FOOTING DRAIN
	DRYWELL
── W ──	WATERLINE W/ GATE VALVE
── F.M. ──	FORCEMAIN

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft

PERCOLATION TEST RESULTS

TESTS PERFORMED ON 01/12/16 BY JDY

TEST NUMBER	TEST DEPTH (INCHES)	PERCOLATION RATE (MINUTES/INCH)
PT 1	36	1.7 MIN./INCH
PT 2	36	1.3 MIN./INCH
PT 3	36	7.5 MIN./INCH
PT 4	36	2.1 MIN./INCH
PT 5	36	16.0 MIN./INCH
PT 6	36	2.4 MIN./INCH
PT 7	36	13.8 MIN./INCH
PT 8	36	12.8 MIN./INCH
PT 9	36	0.6 MIN./INCH
PT 10	36	2.0 MIN./INCH
PT 11	36	4.2 MIN./INCH
PT 12	36	1.9 MIN./INCH
PT 13	36	12.9 MIN./INCH
PT 14	36	1.1 MIN./INCH

SUMMARY OF SOIL TEST PIT LOGS

BACKHOE TEST PITS 1-1 – C-7 LOGGED BY DAVID W. BURKE ON 1/7/16 W/ BILL ZABOLOSKI
BACKHOE TEST PITS 1-14 LOGGED BY DAVID W. BURKE ON 8/31/15

TEST PIT NUMBER	EXISTING GROUNDWATER (DEPTH IN INCHES)	REDOXIMORPHIC FEATURES (DEPTH IN INCHES)	EXISTING LEDGE (DEPTH IN INCHES)
1-1	> 56	42	> 56
1-2	> 52	47	> 52
2-1	60	37	> 62
2-2	> 61	34	> 61
2-3	> 52	28	> 52
3-1	> 60	26	> 60
3-2	> 58	24	> 58
4-1	58	24	> 58
4-2	53	25	> 58
5-1	50	21	> 52
5-2	50	17	> 52
5-3	49	23	> 52
6-1	45	8	> 52
7-1	> 53	18	> 53
7-2	> 56	19	> 56
7-3	> 55	25	> 55
C-1	> 60	49	> 60
C-2	> 55	43	> 55
C-3	> 59	42	> 59
C-4	> 55	26	> 55
C-5	> 58	43	> 56
C-6	> 54	37	> 54
C-7	> 61	30	> 61
1	> 56	49	> 56
2	> 62	43	> 62
3	> 70	59	> 70
4	> 52	42	> 52
5	> 62	43	> 62
6	> 49	27	> 49
7	> 59	49	> 59
8	50	12	> 51
9	43	10	> 46
10	47	8	> 48
11	> 56	30	> 56
12	> 53	25	> 53
13	> 49	24	> 49
14	> 49	26	> 49

CONSTRUCTION REQUIREMENTS

1. UTILITIES INFORMATION SHOWN HEREON WERE OBTAINED FROM THE BEST AVAILABLE SOURCES AND MAY OR MAY NOT BE EITHER ACCURATE OR COMPLETE. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, SHOWN OR NOT SHOWN HEREON.
2. PRIOR TO CONSTRUCTION, ALL MATERIALS SHALL BE APPROVED BY THE ENGINEER.
3. PLOW THE AREA TO A DEPTH OF 7" – 8", PARALLEL TO THE LAND CONTOUR WITH THE PLOW THROWING THE SOIL UPSLOPE TO PROVIDE A PROPER INTERFACE BETWEEN THE FILL AND THE NATURAL SOIL. ONCE THE PLOWING OF THE LAND IS COMPLETED, THE AREA SHALL BE FENCED TO PREVENT VEHICLES AND EQUIPMENT FROM ENTERING THE PLOWED AREA.
4. TO PREVENT COMPACTION, CONSTRUCTION EQUIPMENT SHALL NOT BE MOVED ACROSS THE PLOWED SURFACE OR THE EFFLUENT DISPERSAL AREA. HOWEVER, AFTER PLACEMENT OF A MINIMUM OF SIX (6) INCHES OF SAND FILL OVER THE PLOWED AREA, LOW GROUND PRESSURE CONSTRUCTION EQUIPMENT MAY BE DRIVEN OVER THE PROTECTED SURFACE TO EXPEDITE CONSTRUCTION. CONSTRUCTION AND/OR PLOWING SHALL NOT BE INITIATED WHEN THE SOIL MOISTURE CONTENT IS HIGH.
5. CONSTRUCTION SHOULD BE INITIATED IMMEDIATELY AFTER PREPARATION OF THE SOIL INTERFACE BY PLACING ALL OF THE SAND FILL NEEDED FOR THE MOUND TO THE DEPTH SHOWN ON THE PLANS. THIS DEPTH WILL PERMIT EXCAVATION OF THE TRENCHES TO ACCOMMODATE THE CRUSHED STONE AND DISTRIBUTION PIPING. AFTER THE TRENCHES ARE DUG, THE STONE SHALL BE PLACED INTO THE TRENCH, HAND LEVELED AND THE DISTRIBUTION PIPE INSTALLED. THE ENGINEER SHALL WITNESS THE TESTING OF THE DISTRIBUTION SYSTEM. AFTER THE TESTING IS COMPLETED AND THE CRUSHED STONE HAS BEEN COVERED WITH MIRAFI 140N FABRIC OR EQUAL, THE ENTIRE MOUND SHALL BE COVERED WITH TOPSOIL NATIVE TO THE SITE, OR SOIL OF SIMILAR CHARACTERISTICS TO SUPPORT VEGETATION FOUND IN THE AREA. THE MINIMUM DEPTH OF THE COVER SHALL BE TWELVE (12) INCHES. NATIVE SOIL FROM THE SITE IS SUITABLE, PROVIDED THE TOP FOUR (4) INCHES OF COVER IS TOPSOIL. THE ENTIRE MOUND SHALL BE SEEDED, SODDED, OR OTHERWISE PROVIDED WITH VEGETATIVE COVER TO ASSURE STABILITY OF THE INSTALLATION.
6. THE FILL MATERIAL (MOUND SAND), FROM THE NATURAL SOIL (PLOWED) SURFACE TO THE TOP OF THE TRENCH, SHALL BE SAND WITH A SIEVE ANALYSIS MEETING ONE OF THE THREE GRADING REQUIREMENTS SHOWN IN THE DETAIL ON THIS SHEET. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FURNISH A CURRENT SIEVE ANALYSIS REPORT ON THE SAND TO BE USED, SUBJECT TO APPROVAL BY THE ENGINEER.
7. TRENCHES SHALL BE EXCAVATED INTO THE MOUND SAND AS SHOWN IN THE DETAIL ON THIS SHEET. THE BOTTOM OF THE TRENCHES SHALL BE ABSOLUTELY LEVEL, SIDE TO SIDE AND END TO END.
8. THE PRESSURE DISTRIBUTION PIPE SHALL BE RIGID PLASTIC PIPE, SCHEDULE 40, WITH DIAMETER AS INDICATED. THE PIPE SHALL HAVE A SINGLE ROW OF HOLES, SIZE AND SPACING AS INDICATED ON THE DETAIL SHEET, ALONG THE LENGTH OF THE PIPE WITH THE LAST HOLE IN THE END CAP. THE LATERAL SHALL BE LAID LEVEL. JOINTS AND CONNECTIONS SHALL BE SHALL BE SOLVENT-CEMENTED. HOLES UPWARD WITH ORIFICE SHIELDS.
9. THE PRESSURE DISTRIBUTION PIPE SHALL BE PLACED ON 6 INCHES OF 1 TO 1-1/2 INCH WASHED CRUSHED STONE WITH THE HOLES UPWARD. THE WIDTH AND DEPTH OF THE CRUSHED STONE SHALL BE AS SHOWN ON THE PLANS. THE MATERIAL USED TO COVER THE TOP OF THE STONE SHALL BE MIRAFI 140N FABRIC.
10. THE AREA SURROUNDING THE MOUND SHALL BE GRADED TO PROVIDE DIVERSION OF SURFACE RUN-OFF WATERS.

TESTING REQUIREMENTS

THE CONTRACTOR SHALL FURNISH ALL FACILITIES AND PERSONNEL FOR CONDUCTING THE FOLLOWING TESTS:

1. STRUCTURES TEST:
THE SEPTIC AND PUMP STATION TANKS SHALL BE TESTED BY FILLING WITH WATER TO A POINT ONE (1) FOOT BELOW THE ACCESS LID. A STABILIZATION PERIOD OF ONE (1) HOUR SHALL BE PROVIDED TO ALLOW FOR ABSORPTION. AT THE END OF THE STABILIZATION PERIOD, THE STRUCTURES SHALL BE REFILLED IF NECESSARY TO ONE (1) FOOT BELOW THE ACCESS LID AND THE TEST PERIOD OF 24 HOURS SHALL BEGIN. AT THE END OF THE TEST, THERE SHALL BE NO VISIBLE OR MEASURABLE EXFILTRATION OR INFILTRATION, OR THE TEST SHALL BE CONSIDERED FAILED. IF THE TEST FAILS, THE CONTRACTOR SHALL REPAIR OR WATERPROOF AND RE-TEST AT NO EXTRA EXPENSE TO THE OWNER.
2. FORCE MAIN PRESSURE TEST:
THE PVC FORCE MAIN SHALL BE FILLED WITH WATER AND TESTED BY THE CONTRACTOR TO A MINIMUM PRESSURE OF 50 PSI AT THE HIGHEST POINT ALONG THE FORCE MAIN FOR TWO HOURS AND THE PRESSURE SHALL NOT VARY MORE THAN 5 PSI. THE NEW LINES SHALL NOT BE ACCEPTED IF THE LEAKAGE DURING THE TWO-HOUR TEST IS GREATER THAN THAT DETERMINED BY THE FOLLOWING FORMULA:

$$L = \frac{ND\ P}{7{,}400}$$

WHERE L = THE ALLOWABLE LEAKAGE IN GALLONS PER HOUR
N = THE NUMBER OF JOINTS IN THE LENGTH OF PIPELINE TESTED
D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES
P = THE AVERAGE TEST PRESSURE DURING THE LEAKAGE TEST IN POUNDS PER SQUARE INCH

LEAKAGE IS DEFINED AS THE QUANTITY OF WATER THAT MUST BE SUPPLIED INTO THE NEWLY LAID PIPE TO MAINTAIN THE PRESSURE OF 50 PSI. THE CONTRACTOR SHALL AT ONCE LOCATE ANY LEAKS AND ACHIEVE THE ACCEPTABLE LIMIT AT NO EXTRA CHARGE TO THE OWNER.
3. PUMP STATION TEST:
THE CONTRACTOR AND THE ENGINEER SHALL BE PRESENT DURING START-UP. THE CONTRACTOR SHALL PROVIDE A WATER SOURCE TO PERFORM A FULL OPERATIONAL CHECK OF THE STATION, INCLUDING ALL FLOAT FUNCTIONS AND ALARM TESTING. THE PUMP SHALL BE FIELD-TESTED TO INSURE THE TESTED TO PUMPING CAPACITY MEETS THE PROJECT REQUIREMENTS.
4. DISTRIBUTION LINES TEST:
THE ENGINEER MUST PERFORM A PRESSURE AND DISTRIBUTION TEST OF THE MOUND LATERALS BEFORE COVERING. AFTER DRILLING THE HOLES (UPWARD) AS SPECIFIED & BEFORE INSTALLING ORIFICE SHIELDS, THE UNIFORMITY & HEIGHT SHALL BE TESTED. WHILE PRESSURIZED BY THE PUMP STATION, THE HEIGHT OF THE WATER COLUMN BEING DISCHARGED FROM EACH HOLE WILL BE MEASURED TO VERIFY ADEQUATE PRESSURE AND EVEN DISTRIBUTION. WATER COLUMNS 2.3 FT OR HIGHER WILL CONSTITUTE A PASSING TEST.

INSPECTION

1. THE CONTRACTOR OR OWNER SHALL NOTIFY THE ENGINEER A MINIMUM OF 24 HOURS IN ADVANCE FOR INSPECTION OF:
   A) THE PLOWED SOIL SURFACE PRIOR TO PLACEMENT OF MOUND SAND,
   B) THE SYSTEM PRIOR TO BACKFILLING OVER THE STONE AND TANKS AND TESTING, INCLUDING THE SEPTIC TANK, OPERATION OF THE PUMP STATION OR SIPHON, AND LATERAL LINES.
2. THIS DESIGN MUST BE INSPECTED BY O'LEARY-BURKE CIVIL ASSOCIATES, PLC., ESSEX JUNCTION, VERMONT 05452, TO ENSURE COMPLIANCE WITH THESE PLANS & THE DESIGN INTENT. O'LEARY-BURKE CIVIL ASSOCIATES, PLC WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS THAT ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS, AND THE DESIGN INTENT THAT THE PLANS CONVEY, AND FROM FAILURE TO HAVE BEEN NOTIFIED BY THE CONTRACTOR TO INSPECT THE WORKS AND TESTS IN PROGRESS.

MAINTENANCE

1. THE SEPTIC TANK'S PURPOSE IS TO SETTLE OUT SOLIDS, CONTAIN THE SCUM AND PASS TREATED EFFLUENT. BACTERIA WITHIN THE SEPTIC TANK HELPS DECOMPOSE THE SOLIDS. SHOULD ANY SOLIDS PASS THROUGH THE SEPTIC TANK INTO THE SYSTEM, PREMATURE CLOGGING OF THE PIPING, STONE OR NATIVE SOIL BENEATH THE SYSTEM IS LIKELY TO OCCUR. ONLY HUMAN WASTES SHOULD ENTER THE SEWAGE SYSTEM. WATER USE SHOULD BE CONSERVATIVE AND CLEANING AGENTS CAN NOT ENTER THE SYSTEM, AS THEY KILL BACTERIA.
2. THE STATE FLOW FIGURES OF 490 GAL/DAY/BEDROOM ARE BASED ON SHORT TERM PEAK USE PERIODS (IE. DAILY EVENTS). ACTUAL FLOWS FOR THE PROPOSED 4 BEDROOM HOME SHOULD AVERAGE 200 GALLONS PER DAY.
3. ONCE PER YEAR, THE DEPTH OF SCUM AND SLUDGE IN THE SEPTIC TANK SHOULD BE MEASURED AND THE TANK SHOULD BE PUMPED IF:
   A) THE SLUDGE LEVEL IS WITHIN 12 INCHES OF THE BOTTOM OF THE
   B) THE SCUM LAYER IS WITHIN 3 INCHES OF THE TOP OF THE OUTLET
   C) IF A OR B IS ANTICIPATED TO OCCUR PRIOR TO THE NEXT INSPECTION.
   D) IN ANY CASE, THE TANK SHALL BE PUMPED AT A MAXIMUM 5 YEAR INTERVAL.
4. ONCE PER YEAR, THE PUMP STATION SHOULD BE INSPECTED. ANY SOLIDS OR SLUDGE REMOVED AND THE FLOATS CHECKED FOR PROPER PUMP ON, PUMP OFF AND ALARM CONDITIONS.
5. ABOVE ITEMS 1 – 4 ARE INTENDED TO PROLONG THE LIFE OF THE SYSTEM, NOT GUARANTEE IT. A PROPERLY OPERATED & MAINTAINED SYSTEM GENERALLY FUNCTIONS PROPERLY FOR 8 – 25 YEARS.

SEWAGE DESIGN INFORMATION

1. THE MOUND SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THESE PLANS & THE ENVIRONMENTAL PROTECTION RULES.
2. BASIS OF DESIGN:

LOT 1
NO. OF BEDROOMS = 4
TOTAL DESIGN FLOW = 490 GPD
PERCOLATION RATE = < 60 MIN/INCH
LOADING RATE, Q = 1.0 GPD/SF
ABSORPTION AREA REQUIRED: 490/ 1.0 = 490 SF
BASAL AREA REQUIRED: 490 / 0.74 = 662 SF
(3) @ 4' X 42' = 504 S.F. (1,302 BASAL AREA PROVIDED)

LOTS 2-6
NO. OF BEDROOMS/LOT = 4
TOTAL DESIGN FLOW/LOT = 490 GPD
PERCOLATION RATE = < 60 MIN/INCH
LOADING RATE, Q = 1.0 GPD/SF
ABSORPTION AREA REQUIRED: 490/ 1.0 = 490 SF
BASAL AREA REQUIRED: 490 / 0.74 = 662 SF
(2) @ 4' X 82' = 496 S.F. (1,426 BASAL AREA PROVIDED)

LOT 7
NO. OF BEDROOMS = 4
TOTAL DESIGN FLOW = 490 GPD
PERCOLATION RATE = < 60 MIN/INCH
LOADING RATE, Q = 1.0 GPD/SF
ABSORPTION AREA REQUIRED: 490/ 1.0 = 490 SF
(3) @ 4' X 62' = 744 S.F.
(150% FOR PRESSURIZED SYSTEM. PRIMARY ONLY)

3. SEPTIC TANK: USE A 1,000 GALLON REINFORCED PRE-CAST CONCRETE SEPTIC TANK AS MANUFACTURED BY CAMP PRECAST PRODUCTS OR APPROVED EQUAL, WITH TWO COVERS TO GRADE; WATERPROOF JOINTS & COATING; OUTLET FILTER; AND SET ON THOROUGHLY COMPACTED SUB-BASE.
4. PUMP STATION:
   A) USE A 1,000 GAL. PRE-CAST CONCRETE TANK AS MANUFACTURED BY CAMP PRECAST PRODUCTS OR APPROVED EQUAL, WITH ONE COVER TO GRADE; 4,000 PSI CONCRETE; WATERPROOF JOINTS; AND SET ON THOROUGHLY COMPACTED SUB-BASE. EXTERNALLY COAT THE CONCRETE
   B) ALL BACKFILL MATERIAL AROUND THE TANK SHALL BE THOROUGHLY COMPACTED TO NOT LESS THAN 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE AASHTO-T-99 STANDARD PROCTOR.
   C) ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE AND MATERIALS SHALL MEET U.L. APPROVAL.
   D) THE CONTRACTOR SHALL VERIFY PUMP ADEQUACY WITH THE ENGINEER.
   E) FLOAT CONTROL AND PANEL: ANCHOR SCIENTIFIC OR APPROVED EQUAL. ALARM PANEL SHALL HAVE AN AUDIO SIGNAL.
   F) PUMP CONTROL SHALL BE BY S.J. ELECTRO SYSTEMS PUMP CONTROLS OR APPROVED EQUAL.

PUMP REQUIREMENTS

LOT 1
2" FORCE MAIN (25') = 1 FT
STATIC LIFT = 5.5 FT
VALVES AND FITTINGS = 3 FT
PRESSURE HEAD = 2.5 FT
TOTAL HEAD LOSS = 12 FT
MIN. DISCHARGE RATE = 35 GPM
USE ONE (1) PUMP, SINGLE PHASE, 230 VOLTS, MINIMUM PASSING DIAMETER = 1.25" SOLID SPHERE, 2" DISCHARGE PIPE CONNECTION, MINIMUM CAPACITY: 35 GPM @ 12 FT TDH.

LOT 2
2" FORCE MAIN (45') = 1 FT
STATIC LIFT = 6 FT
VALVES AND FITTINGS = 2 FT
PRESSURE HEAD = 3 FT
TOTAL HEAD LOSS = 12 FT
MIN. DISCHARGE RATE = 35 GPM
USE ONE (1) PUMP, SINGLE PHASE, 230 VOLTS, MINIMUM PASSING DIAMETER = 1.25" SOLID SPHERE, 2" DISCHARGE PIPE CONNECTION, MINIMUM CAPACITY: 35 GPM @ 12 FT TDH.

LOT 3
2" FORCE MAIN (50') = 1 FT
STATIC LIFT = 6 FT
VALVES AND FITTINGS = 2 FT
PRESSURE HEAD = 3 FT
TOTAL HEAD LOSS = 12 FT
MIN. DISCHARGE RATE = 35 GPM
USE ONE (1) PUMP, SINGLE PHASE, 230 VOLTS, MINIMUM PASSING DIAMETER = 1.25" SOLID SPHERE, 2" DISCHARGE PIPE CONNECTION, MINIMUM CAPACITY: 35 GPM @ 12 FT TDH.

LOT 4
2" FORCE MAIN (45') = 1 FT
STATIC LIFT = 7 FT
VALVES AND FITTINGS = 2 FT
PRESSURE HEAD = 3 FT
TOTAL HEAD LOSS = 13 FT
MIN. DISCHARGE RATE = 35 GPM
USE ONE (1) PUMP, SINGLE PHASE, 230 VOLTS, MINIMUM PASSING DIAMETER = 1.25" SOLID SPHERE, 2" DISCHARGE PIPE CONNECTION, MINIMUM CAPACITY: 35 GPM @ 13 FT TDH.

LOT 5
2" FORCE MAIN (370') = 6 FT
STATIC LIFT = 10 FT
VALVES AND FITTINGS = 4 FT
PRESSURE HEAD = 3 FT
TOTAL HEAD LOSS = 23 FT
MIN. DISCHARGE RATE = 35 GPM
USE ONE (1) PUMP, SINGLE PHASE, 230 VOLTS, MINIMUM PASSING DIAMETER = 1.25" SOLID SPHERE, 2" DISCHARGE PIPE CONNECTION, MINIMUM CAPACITY: 35 GPM @ 23 FT TDH.

LOT 6
2" FORCE MAIN (735') = 11 FT
STATIC LIFT = 9 FT
VALVES AND FITTINGS = 4 FT
PRESSURE HEAD = 3 FT
TOTAL HEAD LOSS = 27 FT
MIN. DISCHARGE RATE = 35 GPM
USE ONE (1) PUMP, SINGLE PHASE, 230 VOLTS, MINIMUM PASSING DIAMETER = 1.25" SOLID SPHERE, 2" DISCHARGE PIPE CONNECTION, MINIMUM CAPACITY: 35 GPM @ 27 FT TDH.

LOT 7
2" FORCE MAIN (750') = 19 FT
STATIC LIFT = 9 FT
VALVES AND FITTINGS = 4 FT
PRESSURE HEAD = 3 FT
TOTAL HEAD LOSS = 35 FT
MIN. DISCHARGE RATE = 45 GPM
USE ONE (1) PUMP, SINGLE PHASE, 230 VOLTS, MINIMUM PASSING DIAMETER = 1.25" SOLID SPHERE, 2" DISCHARGE PIPE CONNECTION, MINIMUM CAPACITY: 45 GPM @ 35 FT TDH.

THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.

TABLE A – SEWAGE SYSTEM ELEVATIONS

LOT #	MIN. TOP OF WALL OF HOUSE	MIN. GARAGE ELEVATION	MIN. 4" OUT FROM HOUSE	MIN. SEPTIC TANK IN	MIN. SEPTIC TANK OUT	MIN. PUMP STA. IN	FORCEMAIN OUT	FORCEMAIN SIZE	FORCEMAIN LENGTH	MIN. SYSTEM ELEVATION
1	645.0	644.5	639.0	638.75	638.5	638.25	634.0	2"	25'	640.5
2	642.0	640.75	638.0	637.75	637.5	637.25	633.0	2"	45'	639.2
3	640.0	639.0	636.0	635.75	635.5	635.25	631.0	2"	50'	637.0
4	637.5	637.0	634.0	633.75	633.5	633.25	629.0	2"	45'	635.5
5	637.0	635.75	632.0	631.75	631.5	631.25	627.0	2"	370'	636.8
6	637.0	636.0	634.0	633.75	633.5	633.25	629.0	2"	735'	637.5
7	641.0	640.5	635.0	634.75	634.5	634.25	630.0	2"	750'	637.0

DATE	REVISION		BY
SURVEY: OBCA	☐ RECORD DRAWING ☐ PRELIMINARY	A Planned Unit Development	DATE: 3/20/16
DESIGN: OBCA	■ FINAL ☐ SKETCH/CONCEPT	VT Route 15 / 3 Raceway Road – Jericho, VT	JOB #: 2015-81
DRAWN: PFH	O'LEARY-BURKE CIVIL ASSOCIATES, PLC	Sewage Disposal 30-Scale Plan	FILE: 2015-81-S1
CHECKED: DWB	13 CORPORATE DRIVE, ESSEX JCT., VT; PHONE: 878-9990; FAX: 878-9989; E-MAIL: obca@olearyburke.com		PLAN SHEET #: 3
SCALE: 1" = 30'			

SUMMARY OF SOIL TEST PIT LOGS

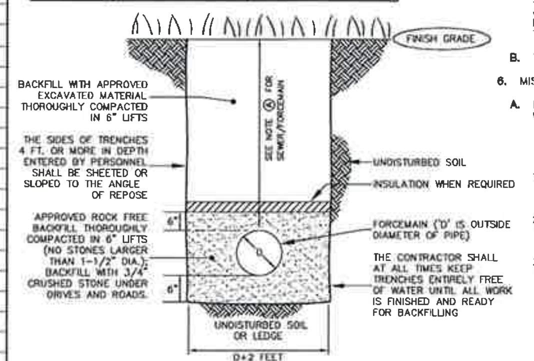
BACKHOE TEST PITS 1-1 – C-7 LOGGED BY DAVID W. BURKE ON 1/7/16 W/ BILL ZABOLOSKI
BACKHOE TEST PITS 1-14 LOGGED BY DAVID W. BURKE ON 8/31/15

TEST PIT NUMBER	EXISTING GROUNDWATER (DEPTH IN INCHES)	REDOXIMORPHIC FEATURES (DEPTH IN INCHES)	EXISTING LEDGE (DEPTH IN INCHES)
1-1	> 56	42	> 56
1-2	> 52	47	> 52
2-1	60	37	> 62
2-2	> 61	34	> 61
2-3	> 52	28	> 52
3-1	> 60	26	> 60
3-2	> 58	24	> 58
4-1	58	24	> 58
4-2	53	25	> 58
5-1	50	21	> 52
5-2	50	17	> 52
5-3	49	23	> 52
6-1	45	8	> 52
7-1	> 53	18	> 53
7-2	> 56	19	> 56
7-3	> 55	25	> 55
C-1	> 60	49	> 60
C-2	> 55	43	> 55
C-3	> 59	42	> 59
C-4	> 55	26	> 55
C-5	> 58	43	> 58
C-6	> 54	37	> 54
C-7	> 61	30	> 61
1	> 56	49	> 56
2	> 62	43	> 62
3	> 70	59	> 70
4	> 52	42	> 52
5	> 62	43	> 62
6	> 49	27	> 49
7	> 59	49	> 59
8	50	12	> 51
9	43	10	> 46
10	47	8	> 48
11	> 56	30	> 56
12	> 53	25	> 53
13	> 49	24	> 49
14	> 49	26	> 49

PERCOLATION TEST RESULTS

TESTS PERFORMED ON 01/12/16 BY JDY

TEST NUMBER	TEST DEPTH (INCHES)	PERCOLATION RATE (MINUTES/INCH)
PT 1	36	1.7 MIN./INCH
PT 2	36	1.3 MIN./INCH
PT 3	36	7.5 MIN./INCH
PT 4	36	2.1 MIN./INCH
PT 5	36	16.0 MIN./INCH
PT 6	36	2.4 MIN./INCH
PT 7	36	13.8 MIN./INCH
PT 8	36	12.8 MIN./INCH
PT 9	36	0.6 MIN./INCH
PT 10	36	2.0 MIN./INCH
PT 11	36	4.2 MIN./INCH
PT 12	36	1.9 MIN./INCH
PT 13	36	12.9 MIN./INCH
PT 14	36	1.1 MIN./INCH



NOTE Ⓐ (FOR SEWER AND FORCEMAIN TRENCHES):
IF COVER IS LESS THAN 5' OVER FORCEMAIN, PLACE 2' WIDE BY 4" THICK INSULATION BOARD, SUITABLE FOR BURIAL, ON A 6" BED OF SAND OVER THE PIPE. IN NO CASE SHALL DEPTH OF FORCEMAIN COVER BE LESS THAN 3'. BUILDING SEWER SHALL HAVE A MIN. DEPTH OF COVER OF 2'.

TYPICAL SEWER + FORCEMAIN TRENCH

NTS

SEWAGE DESIGN INFORMATION

1. IT IS THE OPINION OF THE ENGINEER THAT THE SOIL CONDITIONS WITHIN THE PROPOSED SEWAGE DISPOSAL AREAS MEET THE STATE OF VERMONT EPR RULES & ARE SUITABLE FOR SEWAGE DISPOSAL AS SHOWN ON THIS PLAN AND PLAN SHEETS 1, 3 & 4.
2. THE SEWAGE DISPOSAL SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TOWN OF RICHMOND REGULATIONS AND THE VERMONT ENVIRONMENTAL PROTECTION RULES.
3. THE FOLLOWING MINIMUM ISOLATION DISTANCES SHALL BE MAINTAINED FROM THE DISPOSAL AREA TO:

PROPERTY LINE	25 FEET
BUILDING (NO FOOTING DRAIN)	20 FEET
DRIVEWAYS	10 FEET
TREES	10 FEET

4. BASIS OF DESIGN:

LOTS 1 – 7 (INDIVIDUAL 4 BDRM. SYSTEMS)
DESIGN FLOW, EPR 490 GPD EACH

** SEE TABLE A FOR DETAILED INFORMATION*

5. SEPTIC TANK
   A. LOTS 1 – 7 SHALL EACH HAVE A 1,000 GALLON PRECAST CONCRETE SEPTIC TANK, CAMP PRECAST OR APPROVED EQUAL, WITH WATERPROOF JOINTS AND SET ON THOROUGHLY COMPACTED SUBBASE. THE OUTLET BAFFLE SHALL HAVE AN EFFLUENT FILTER & A 2 FOOT DIAMETER RISER TO GRADE WITH COVER.
   B. THE USE OF GARBAGE DISPOSALS IS NOT ALLOWED.
6. MISC.:
   A. IF A WATER TREATMENT SYSTEM IS GOING TO BE USED, THE BACKWASH WATER MAY NOT BE DISCHARGED INTO THE DISPOSAL SYSTEM.

INSPECTION REQUIREMENTS

1. THE CONTRACTOR SHALL NOTIFY THE ENGINEER & AUTHORIZED TOWN INSPECTOR A MINIMUM OF 24 HOURS IN ADVANCE FOR INSPECTION OF THE BOTTOM OF THE TRENCHES PRIOR TO PLACEMENT OF STONE AND PIPING.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER & AUTHORIZED TOWN INSPECTOR A MINIMUM OF 24 HOURS IN ADVANCE FOR INSPECTION OF THE SYSTEM PRIOR TO BACKFILLING, INCLUDING THE DISTRIBUTION BOX (LEVELNESS CHECK) & SEPTIC TANK.
3. THIS DESIGN MUST BE INSPECTED BY O'LEARY-BURKE CIVIL ASSOCIATES, PLC ESSEX JUNCTION, VERMONT TO ENSURE COMPLIANCE WITH THESE PLANS. O'LEARY-BURKE CIVIL ASSOCIATES WAIVES ANY AND ALL RESPONSIBILTY AND LIABILITY FOR PROBLEMS THAT ARISE FROM FAILURE TO FOLLOW FAILURE TO FOLLOW SPECIFICATIONS, AND THE DESIGN INTENT THAT THE THE PLANS CONVEY, AND FROM FAILURE TO HAVE BEEN NOTIFIED BY THE CONTRACTOR FOR INSPECTIONS.

STAKE-OUT REQUIREMENTS

1. THE SEWAGE SYSTEM LOCATIONS SHALL BE STAKED OR VERIFIED BY O'LEARY-BURKE CIVIL ASSOCIATES, PLC PRIOR TO CONSTRUCTION.

GENERAL SPECIFICATIONS

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST AGENCY OF NATURAL RESOURCES STANDARDS, 10-STATE STANDARDS, AWWA STANDARDS, AND THESE PLANS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS OWN EXPENSE FOR ENSURING THAT THE DUST CREATED AS A RESULT OF CONSTRUCTION DOES NOT CREATE A NUISANCE OR A SAFETY HAZARD. WHERE AND WHEN DEEMED NECESSARY BY THE ENGINEER, THE CONTRACTOR WILL BE REQUIRED TO WET SECTIONS OF THE CONSTRUCTION AREA WITH WATER OR APPLY CALCIUM CHLORIDE OR SWEEP THE ROADWAY WITH A POWER BROOM AS DUST CONTROL.
3. ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEEDING AND MULCHING PRIOR TO OCTOBER 1 OF EACH YEAR. ANY DISTURBED AREAS OUTSIDE THE ROADWAY SHALL BE IMMEDIATELY SEEDED AND MULCHED WITHIN 15 DAYS. ANY WORK PERFORMED AFTER OCTOBER 1 OF EACH YEAR SHALL BE STABILIZED WITH MULCH AND NETTING SUFFICIENT TO PREVENT EROSION AND SHALL BE IMMEDIATELY SEEDED AND REMULCHED AS SOON AS WEATHER PERMITS IN THE SPRING.
4. THE CONTRACTOR SHALL ENCLOSE THE TRUNKS OF LARGE TREES NEAR THE NEAR THE NEW CONSTRUCTION WITH SNOW FENCING TO PROTECT THE TREES FROM INJURY BY EQUIPMENT.
5. ALL SLOPES, DITCHES, AND DISTURBED AREAS SHALL BE GRADED SMOOTH AND BE FREE OF POCKETS WITH SUFFICIENT SLOPE TO ENSURE DRAINAGE.
6. ALL FILL OR BACKFILL SHALL BE PLACED IN 6 INCH LIFTS AND THOROUGHLY COMPACTED TO 95% OF MAXIMUM DENSITY OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698 STANDARD PROCTOR.
7. ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 4 INCHES OF TOPSOIL AND BE SEEDED, FERTILIZED, LIMED, AND MULCHED IN ACCORDANCE WITH THE FOLLOWING:
   A) SEED MIXTURE IN ALL AREAS SHALL BE URBAN MIX CONFORMING TO THE TABLE TO THE RIGHT. FOR SEEDING BETWEEN SEPTEMBER 1 AND OCTOBER 1, WINTER RYE SHALL BE USED AT A RATE OF 100 LBS PER ACRE.
   B) FERTILIZER SHALL BE STANDARD COMMERCIAL GRADE CONFORMING TO THE STATE FERTILIZER LAW AND TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS. DRY FERTILIZER, IF USED, SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE. LIQUID FERTILIZER, IF USED, SHALL BE APPLIED IN A 1-2-1 RATIO WITH THE MINIMUM RATE TO INCLUDE 100 POUNDS OF NITROGEN, 200 POUNDS OF PHOSPHATE, AND 100 POUNDS OF POTASH PER ACRE.
   C) LIMESTONE SHALL CONFORM TO ALL STATE AND FEDERAL REGULATIONS AND TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS. THE LIMESTONE SHALL BE APPLIED AT A RATE OF ONE TON PER ACRE AS DIRECTED.
   D) WITHIN 24 HOURS OF APPLICATION OF FERTILIZER, LIME, AND SEED, THE SURFACE SHALL BE MULCHED WITH A HAY MULCH. MULCH SHALL BE SPREAD UNIFORMLY OVER THE AREA AT A RATE OF TWO TONS PER ACRE AS ORDERED BY THE ENGINEER.
   E) ALL TURF ESTABLISHMENT SHALL BE PERFORMED IN ACCORDANCE WITH THE VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION, SECTION 651.
   F) TOPSOIL SHALL BE STOCKPILED, SEEDED, AND MULCHED UNTIL REUSED. HAYBALES SHALL BE PLACED AND STAKED CONTINUOUSLY AROUND THE BOTTOM OF THE TOPSOIL PILES.

MOUND SYSTEM (LOTS 1-6) CONSTRUCTION REQUIREMENTS

1. UTILITIES INFORMATION SHOWN HEREON WERE OBTAINED FROM THE BEST AVAILABLE SOURCES AND MAY OR MAY NOT BE EITHER ACCURATE OR COMPLETE. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, SHOWN OR NOT SHOWN HEREON.

2. PRIOR TO CONSTRUCTION, ALL MATERIALS SHALL BE APPROVED BY THE ENGINEER.

3. PLOW THE AREA TO A DEPTH OF 7" – 8", PARALLEL TO THE LAND CONTOUR WITH THE PLOW THROWING THE SOIL UPSLOPE TO PROVIDE A PROPER INTERFACE BETWEEN THE FILL AND THE NATURAL SOIL. ONCE THE PLOWING OF THE LAND IS COMPLETED, THE AREA SHALL BE FENCED TO PREVENT VEHICLES AND EQUIPMENT FROM ENTERING THE PLOWED AREA.

4. TO PREVENT COMPACTION, CONSTRUCTION EQUIPMENT SHALL NOT BE MOVED ACROSS THE PLOWED SURFACE OR THE EFFLUENT DISPERSAL AREA. HOWEVER, AFTER PLACEMENT OF A MINIMUM OF SIX (6) INCHES OF SAND FILL OVER THE PLOWED AREA, LOW GROUND PRESSURE CONSTRUCTION EQUIPMENT MAY BE DRIVEN OVER THE PROTECTED SURFACE TO EXPEDITE CONSTRUCTION. CONSTRUCTION AND/OR PLOWING SHALL NOT BE INITIATED WHEN THE SOIL MOISTURE CONTENT IS HIGH.

5. CONSTRUCTION SHOULD BE INITIATED IMMEDIATELY AFTER PREPARATION OF THE SOIL INTERFACE BY PLACING ALL OF THE SAND FILL NEEDED FOR THE MOUND TO THE DEPTH SHOWN ON THE PLANS. THIS DEPTH WILL PERMIT EXCAVATION OF THE TRENCHES TO ACCOMMODATE THE CRUSHED STONE AND DISTRIBUTION PIPING. AFTER THE TRENCHES ARE DUG, THE STONE SHALL BE PLACED INTO THE TRENCH, HAND LEVELED AND THE DISTRIBUTION PIPE INSTALLED. THE ENGINEER SHALL WITNESS THE TESTING OF THE DISTRIBUTION SYSTEM. AFTER THE TESTING IS COMPLETED AND THE CRUSHED STONE HAS BEEN COVERED WITH MIRAFI 140N FABRIC OR EQUAL, THE ENTIRE MOUND SHALL BE COVERED WITH TOPSOIL NATIVE TO THE SITE, OR SOIL OF SIMILAR CHARACTERISTICS TO SUPPORT VEGETATION FOUND IN THE AREA. THE MINIMUM DEPTH OF THE COVER SHALL BE TWELVE (12) INCHES. NATIVE SOIL FROM THE SITE IS SUITABLE, PROVIDED THE TOP FOUR (4) INCHES OF COVER IS TOPSOIL. THE ENTIRE MOUND SHALL BE SEEDED, SODDED, OR OTHERWISE PROVIDED WITH VEGETATIVE COVER TO ASSURE STABILITY OF THE INSTALLATION.

6. THE FILL MATERIAL (MOUND SAND), FROM THE NATURAL SOIL (PLOWED) SURFACE TO THE TOP OF THE TRENCH, SHALL BE SAND WITH A SIEVE ANALYSIS MEETING ONE OF THE THREE GRADING REQUIREMENTS SHOWN IN THE DETAIL ON THIS SHEET. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FURNISH A CURRENT SIEVE ANALYSIS REPORT ON THE SAND TO BE USED, SUBJECT TO APPROVAL BY THE ENGINEER.

7. TRENCHES SHALL BE EXCAVATED INTO THE MOUND SAND AS SHOWN IN THE DETAIL ON THIS SHEET. THE BOTTOM OF THE TRENCHES SHALL BE ABSOLUTELY LEVEL, SIDE TO SIDE AND END TO END.

8. THE PRESSURE DISTRIBUTION PIPE SHALL BE RIGID PLASTIC PIPE, SCHEDULE 40, WITH DIAMETER AS INDICATED. THE PIPE SHALL HAVE A SINGLE ROW OF HOLES, SIZE AND SPACING AS INDICATED ON THE DETAIL SHEET, ALONG THE LENGTH OF THE PIPE WITH THE LAST HOLE IN THE END CAP. THE LATERAL SHALL BE LAID LEVEL. JOINTS AND CONNECTIONS SHALL BE SHALL BE SOLVENT-CEMENTED. HOLES UPWARD WITH ORIFICE SHIELDS.

9. THE PRESSURE DISTRIBUTION PIPE SHALL BE PLACED ON 6 INCHES OF 1 TO 1-1/2 INCH WASHED CRUSHED STONE WITH THE HOLES UPWARD. THE WIDTH AND DEPTH OF THE CRUSHED STONE SHALL BE AS SHOWN ON THE PLANS. THE MATERIAL USED TO COVER THE TOP OF THE STONE SHALL BE MIRAFI 140N FABRIC.

10. THE AREA SURROUNDING THE MOUND SHALL BE GRADED TO PROVIDE DIVERSION OF SURFACE RUN-OFF WATERS.

PRESSURIZED SYSTEM (LOT 7) CONSTRUCTION REQUIREMENTS

1. THE OULET PIPE FROM THE SEPTIC TANK TO THE PUMP STATION SHALL BE 4" SDR 35 PVC, AT A MINIMUM SLOPE OF 1/8"/FT. THE PIPE SHALL BE LAID ON UNDISTURBED GROUND OR PROPERLY BEDDED.

2. WHEN THE TRENCHES HAVE BEEN EXCAVATED, THE SIDES AND BOTTOM SHALL BE RAKED TO LOOSEN ANY SMEARED SOIL SURFACES.

3. CONSTRUCTION EQUIPMENT SHALL BE KEPT OFF THE AREA TO BE USED FOR SEWAGE DISPOSAL AS MUCH AS POSSIBLE TO PREVENT COMPACTION OF THE SOILS.

4. PLACEMENT OF CRUSHED STONE IN THE TRENCHES SHALL BE INITIATED IMMEDIATELY AFTER TRENCH EXCAVATION IS COMPLETED. THIS WILL REQUIRE THAT THE ENGINEER & AUTHORIZED TOWN INSPECTOR BE PRESENT AT THE TIME OF COMPLETION OF TRENCH EXCAVATION (SEE INSPECTION SPECIFICATIONS).

5. 6" OF CLEAN CRUSHED STONE (1 TO 1-1/2 INCHES) SHALL BE PLACED IN THE BOTTOM OF THE TRENCHES IN ACCORDANCE WITH THE PLANS. THE DISTRIBUTION LINE SHALL BE CAREFULLY PLACED ON THE BEDDING AT A UNIFORM SLOPE (1/8 INCH PER 10 FEET) AND COVERED WITH AT LEAST 2 INCHES OF STONE. THE ENDS OF THE DISTRIBUTION LINES SHALL BE CAPPED.

6. THE GRADING SHALL DIRECT RUN-OFF AWAY FROM THE SEPTIC SYSTEM AREAS AND BE SMOOTH AND FREE OF POCKETS WITH SUFFICIENT SLOPE TO ENSURE DRAINAGE.

TESTING REQUIREMENTS

THE CONTRACTOR SHALL FURNISH ALL FACILITIES AND PERSONNEL FOR CONDUCTING THE FOLLOWING TESTS:

1. STRUCTURES TEST:
   THE SEPTIC TANKS SHALL BE TESTED BY FILLING WITH WATER TO A POINT ONE (1) FOOT BELOW THE ACCESS LID UNLESS A TOP JOINT TANK IS USED. A STABILIZATION PERIOD OF ONE (1) HOUR SHALL BE PROVIDED TO ALLOW FOR ABSORPTION. AT THE END OF THE STABILIZATION PERIOD, THE STRUCTURES SHALL BE REFILLED IF NECESSARY TO ONE (1) FOOT BELOW THE ACCESS LID AND THE TEST PERIOD OF 24 HOURS SHALL BEGIN. AT THE END OF THE TEST, THERE SHALL BE NO VISIBLE OR MEASURABLE EXFILTRATION OR INFILTRATION, OR THE TEST SHALL BE CONSIDERED FAILED. IF THE TEST FAILS, THE CONTRACTOR SHALL REPAIR OR WATERPROOF AND RE-TEST AT NO EXTRA EXPENSE TO THE OWNER.
2. FORCE MAIN PRESSURE TEST:
   THE PVC FORCE MAIN SHALL BE FILLED WITH WATER AND TESTED BY THE CONTRACTOR TO A MINIMUM PRESSURE OF 50 PSI AT THE HIGHEST POINT ALONG THE FORCE MAIN FOR TWO HOURS AND THE PRESSURE SHALL NOT VARY MORE THAN 5 PSI. THE NEW LINES SHALL NOT BE ACCEPTED IF THE LEAKAGE DURING THE TWO-HOUR TEST IS GREATER THAN THAT DETERMINED BY THE FOLLOWING FORMULA:

   WHERE L = THE ALLOWABLE LEAKAGE IN GALLONS PER HOUR

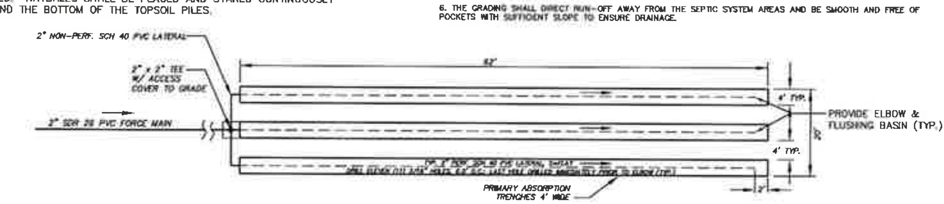
   $$L = \frac{ND\sqrt{P}}{7{,}400}$$

   N = THE NUMBER OF JOINTS IN THE LENGTH OF PIPELINE TESTED
   D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES
   P = THE AVERAGE TEST PRESSURE DURING THE LEAKAGE TEST IN POUNDS PER SQUARE INCH

   LEAKAGE IS DEFINED AS THE QUANTITY OF WATER THAT MUST BE SUPPLIED INTO THE NEWLY LAID PIPE TO MAINTAIN THE PRESSURE OF 50 PSI. THE CONTRACTOR SHALL AT ONCE LOCATE ANY LEAKS AND ACHIEVE THE ACCEPTABLE LIMIT AT NO EXTRA CHARGE TO THE OWNER.
3. PUMP STATION TEST:
   THE CONTRACTOR AND THE ENGINEER SHALL BE PRESENT DURING START-UP. THE CONTRACTOR SHALL PROVIDE A WATER SOURCE TO PERFORM A FULL OPERATIONAL CHECK OF THE STATION, INCLUDING ALL FLOAT FUNCTIONS AND ALARM TESTING. THE PUMP SHALL BE FIELD-TESTED TO INSURE THE TESTED TO PUMPING CAPACITY MEETS THE PROJECT REQUIREMENTS.
4. DISTRIBUTION LINES TEST:
   THE ENGINEER MUST PERFORM A PRESSURE AND DISTRIBUTION TEST OF THE LATERALS BEFORE COVERING. AFTER DRILLING THE HOLES (UPWARD) AS SPECIFIED & BEFORE INSTALLING ORIFICE SHIELDS, THE UNIFORMITY & HEIGHT SHALL BE TESTED. WHILE PRESSURIZED BY THE PUMP STATION, THE HEIGHT OF THE WATER COLUMN BEING DISCHARGED FROM EACH HOLE WILL BE MEASURED TO VERIFY ADEQUATE PRESSURE AND EVEN DISTRIBUTION. WATER COLUMNS 2.3 FT OR HIGHER WILL CONSTITUTE A PASSING TEST.

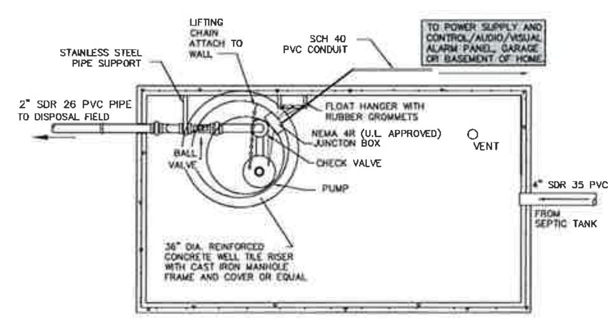
OPERATION + MAINTENANCE RECOMMENDATIONS

1. THE SEPTIC TANK'S PURPOSE IS TO SETTLE OUT SOLIDS, CONTAIN THE SCUM AND PASS TREATED EFFLUENT. BACTERIA WITHIN THE SEPTIC TANK HELPS DECOMPOSE THE SOLIDS. SHOULD ANY SOLIDS PASS THROUGH THE SEPTIC TANK INTO THE SYSTEM, PREMATURE CLOGGING OF THE PIPING, STONE OR NATIVE SOIL BENEATH THE SYSTEM IS LIKELY TO OCCUR. ONLY HUMAN WASTES SHOULD ENTER THE SEWAGE SYSTEM, WATER USE SHOULD BE CONSERVATIVE AND CLEANING AGENTS CAN NOT ENTER THE SYSTEM, AS THEY KILL BACTERIA.
2. THE STATE FLOW FIGURES OF ARE BASED ON SHORT TERM PEAK USE PERIODS (IE. DAILY EVENTS). ACTUAL FLOWS FOR A 4 BEDROOM HOME SHOULD AVERAGE 175 – 225 GALLONS PER DAY.
3. ONCE PER YEAR, THE DEPTH OF SCUM AND SLUDGE IN THE SEPTIC TANK SHOULD BE MEASURED AND THE TANK SHALL BE PUMPED IF:
   A) THE SLUDGE LEVEL IS WITHIN 12 INCHES OF THE BOTTOM OF THE
   B) THE SCUM LAYER IS WITHIN 3 INCHES OF THE TOP OF THE OUTLET
   C) IF A OR B IS ANTICIPATED TO OCCUR PRIOR TO THE NEXT INSPECTION.
   D) IN ANY CASE, THE TANK SHALL BE PUMPED AT A MAXIMUM 5 YEAR INTERVAL.
4. ONCE A YEAR, THE DISTRIBUTION BOX SHOULD BE INSPECTED AND ANY SETTLED SOLIDS REMOVED.
5. ABOVE ITEMS 1 – 4 ARE INTENDED TO PROLONG THE LIFE OF THE SYSTEM, NOT GUARANTEE IT. A PROPERLY OPERATED & MAINTAINED SYSTEM GENERALLY FUNCTIONS PROPERLY FOR 8 – 25 YEARS.



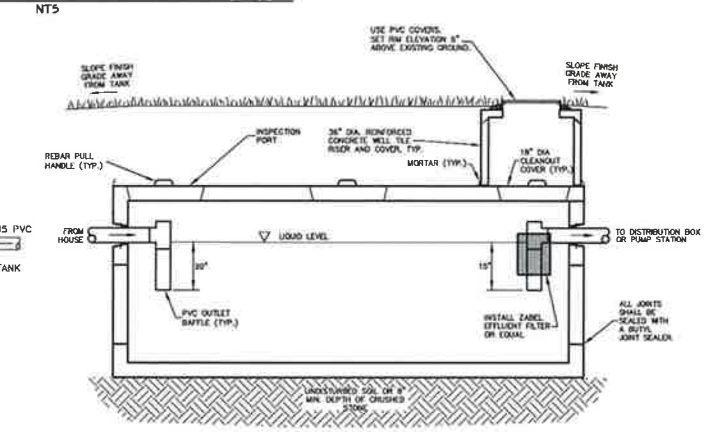
PRESSURIZED SYSTEM (LOT 7)

NTS



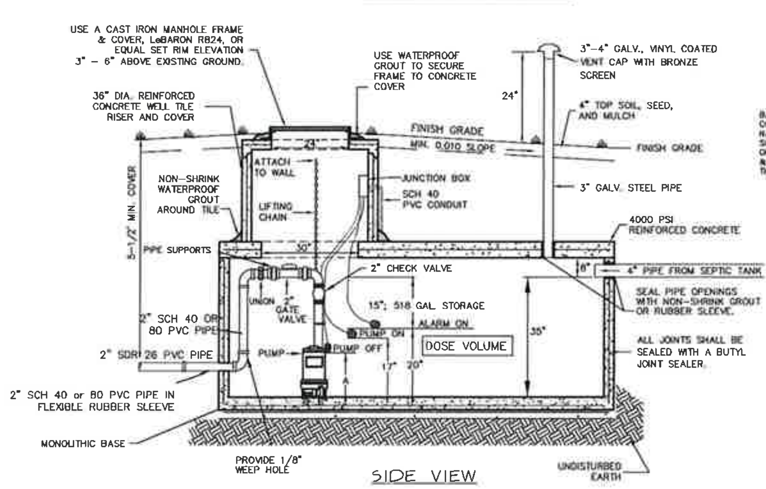
PLAN VIEW

PUMP CHAMBER DIMENSIONS BASED ON CAMP PRECAST 1,000 GALLON LOW PUMP STATION, 1000PSL (415 GAL/VF)



CONCRETE SEPTIC TANK

NTS



SIDE VIEW

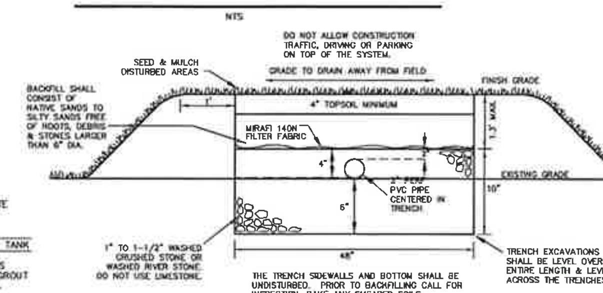
TYPICAL PUMP STATION

NTS

NOTE:
SEE PLAN SHEET 3 FOR PUMP REQUIREMENTS

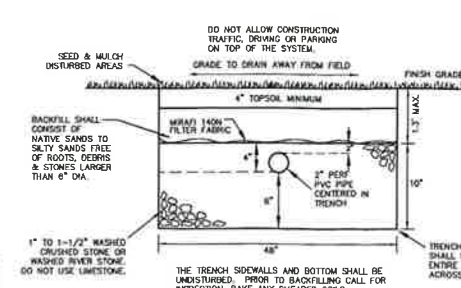
TABLE B – SHARED PUMP STATION INFORMATION

LOT #	DAILY FLOW	PUMP CHAMBER SIZE	STORAGE / VF	PUMP OFF (A)	PUMP ON (B)	DOSE VOLUME	ALARM (C)	DEPTH (D)	STORAGE / GAL
1-5 + 7	490 GPD	1,000 GAL. (1000PSL)	415	11"	17"	207	20"	35"	15" (518 GAL.)
6	490 GPD	1,000 GAL. (1000PSL)	415	8"	17"	311	20"	35"	15" (518 GAL.)



LOT 7 TRENCH

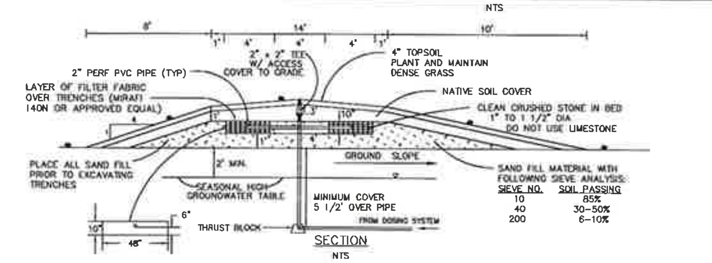
NTS



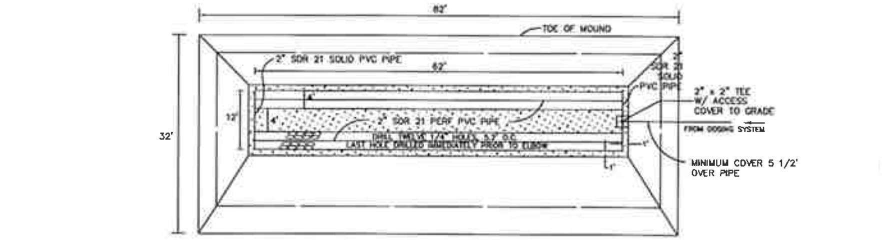
MOUND ABSORPTION TRENCH

NTS

NOTES:
REFER TO PLAN SHEET 3 FOR ADDITIONAL SEWAGE INFORMATION



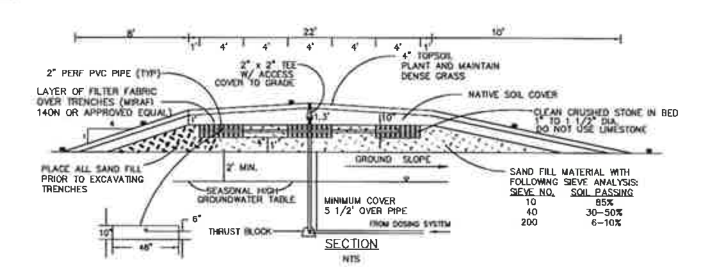
SECTION
NTS



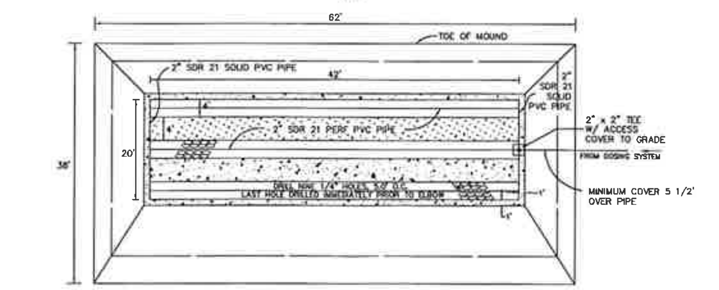
PLAN VIEW
NTS

MOUND SYSTEM (LOTS 2-6)

NTS



SECTION
NTS



PLAN VIEW
NTS

MOUND SYSTEM (LOT 1)

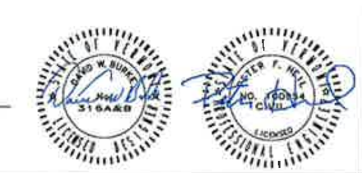
NTS

CONSTRUCTION NOTES:

CUT AND MOVE ALL ABOVE GROUND VEGETATION WITH A HAND MOWER. THE EXISTING GROUND SHALL NOT BE GRADED OR EXCAVATED. THE CONTRACTOR SHALL PLOW THE SURFACE TO A DEPTH OF 7"-8", PARALLEL TO THE LAND CONTOUR WITH THE PLOW THROWING THE SOIL SLOPE.

CONSTRUCTION EQUIPMENT SHALL NOT BE DRIVEN ACROSS THE ORIGINAL GROUND OR THE PLOWED SURFACE.

THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.



DATE	REVISION		BY
SURVEY: OBCA	☐ RECORD DRAWING ☐ PRELIMINARY ■ FINAL ☐ SKETCH/CONCEPT	A Planned Unit Development	DATE: 3/20/16
DESIGN: OBCA	O'LEARY-BURKE CIVIL ASSOCIATES, PLC	VT Route 15 / 3 Raceway Road - Jericho, VT	JOB #: 2015-81
DRAWN: PFH	13 CORPORATE DRIVE, ESSEX JCT., VT	Sewage Disposal	FILE: 2015-81-S1
CHECKED: DWB	PHONE: 878-9990 FAX: 878-9989	Details + Specifications	PLAN SHEET #: 4
SCALE: 1" = 60'	E-MAIL: obca@olearyburke.com		

GENERAL WATER SPECIFICATIONS

1. CONTRACTOR SHALL CONTACT ALL UTILITIES BEFORE EXCAVATION TO VERIFY THE LOCATION OF ANY UNDERGROUND LINES. THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION. UTILITIES INFORMATION SHOWN ON SHEET 1 WERE OBTAINED FROM THE BEST AVAILABLE SOURCE AND MAY OR MAY NOT BE EITHER ACCURATE OR COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, SHOWN OR NOT SHOWN HEREON.

2. THE HORIZONTAL AND VERTICAL SEPARATION FOR SEWER AND WATER LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE "VERMONT WATER SUPPLY STANDARDS."

3. THE WATER MAINS SHALL BE CONSTRUCTED, TESTED, AND DISINFECTED IN ACCORDANCE WITH AWWA STANDARDS C-600 AND C-651 WITH THE EXCEPTION OF THE TABLET METHOD OF DISINFECTION.

   THE CONTRACTOR SHALL FURNISH ALL GAUGES, TESTING PLUGS, CAPS, AND ALL OTHER NECESSARY EQUIPMENT AND LABOR TO PERFORM LEAKAGE, PRESSURE AND DISINFECTION TESTS IN SECTIONS OF AN APPROVED LENGTH. EACH VALVED SECTION OR A MAXIMUM OF ONE THOUSAND FEET (1,000') OF THE PIPE SHALL BE TESTED. ALL WATER REQUIRED FOR TESTING SHALL BE POTABLE. ALL TESTING SHALL BE CONDUCTED IN THE PRESENCE OF THE ENGINEER.

   FOR THE PRESSURE TEST, THE CONTRACTOR SHALL DEVELOP AND MAINTAIN 200 POUNDS PER SQUARE INCH FOR TWO HOURS. FAILURE TO HOLD THE DESIGNATED PRESSURE FOR THE TWO-HOUR PERIOD CONSTITUTES A FAILURE OF THE SECTION TESTED. THE LEAKAGE TEST SHALL BE PERFORMED CONCURRENTLY WITH THE PRESSURE TEST. DURING THE TEST, THE CONTRACTOR SHALL MEASURE THE QUANTITY OF WATER REQUIRED TO MAINTAIN THE TEST PRESSURE. LEAKAGE SHALL NOT EXCEED THE QUANTITY GIVEN BY:

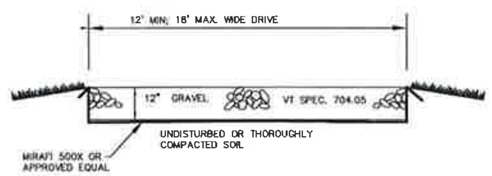
   $L = 2 \times SD$ (SQUARE ROOT OF P) / 148,000

   L = LEAKAGE IN GALLONS/HOUR
   S = LENGTH OF PIPELINE TESTED
   D = DIAMETER OF PIPE IN INCHES
   P = AVERAGE TEST PRESSURE IN PSI

   ALL TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH AWWA C600 LATEST REVISION. SHOULD ANY SECTION OF THE PIPE FAIL EITHER THE PRESSURE OR LEAKAGE TESTS, THE CONTRACTOR SHALL DO EVERYTHING NECESSARY TO LOCATE AND REPAIR OR REPLACE THE DEFECTIVE PIPE, FITTINGS, OR JOINTS AT NO EXPENSE TO THE OWNER. IF, FOR ANY REASON, THE ENGINEER SHOULD ALTER THE FOREGOING PROCEDURES, THE CONTRACTOR SHALL REMAIN RESPONSIBLE FOR THE TIGHTNESS OF THE LINE WITH THE ABOVE REQUIREMENTS. THE METHOD OF DISINFECTION SHALL BE BY THE CONTINUOUS FEED METHOD UNLESS OTHERWISE APPROVED BY THE ENGINEER. AFTER FILLING, FLUSHING, AND THE INITIAL ADDITION OF CHLORINE SOLUTION, THE FREE CHLORINE CONCENTRATION WITHIN THE PIPE SHALL BE AT LEAST 20 MG/L. THE CHLORINATED WATER SHALL REMAIN IN THE MAIN FOR A PERIOD OF AT LEAST 24 HOURS. AT THE END OF THIS PERIOD, THE TREATED WATER IN ALL PORTIONS OF THE MAIN SHALL HAVE A RESIDUAL OF NOT LESS THAN 10 MG/L FREE CHLORINE. ALL DISINFECTION SHALL BE PERFORMED UNDER THE SUPERVISION OF THE ENGINEER. THE DISINFECTION PROCESS SHALL BE DEEMED ACCEPTABLE ONLY AFTER SAMPLES OF WATER FROM THE FLUSHED, DISINFECTED MAIN TAKEN BY THE ENGINEER AND TESTED AT AN APPROVED LABORATORY SHOW NO EVIDENCE OF BACTERIOLOGICAL CONTAMINATION. DISINFECTION SHALL CONFORM TO THE LATEST AWWA C651 REVISION.

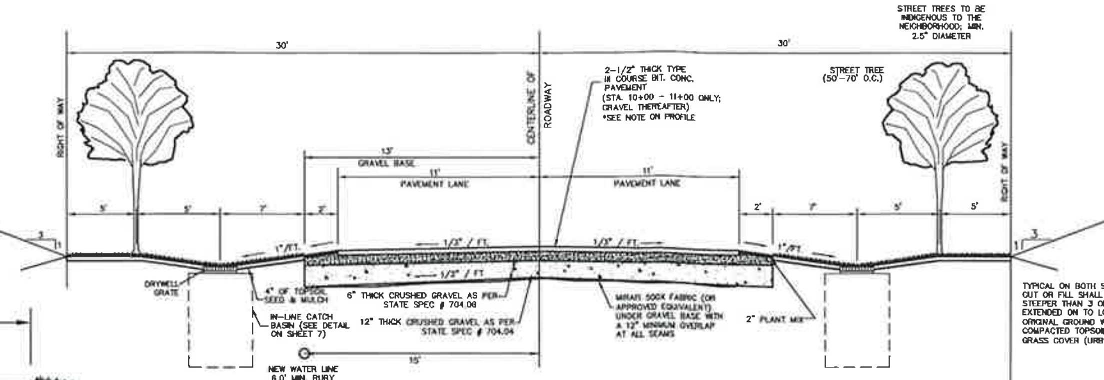
   THE PIPELINE AND APPURTENANCES SHALL BE MAINTAINED IN AN UNCONTAMINATED CONDITION UNTIL FINAL ACCEPTANCE. DISINFECTION SHALL BE REPEATED WHEN AND WHERE REQUIRED AT NO EXPENSE TO THE OWNER UNTIL FINAL ACCEPTANCE BY THE OWNER.

4. ALL NEW WATER MAIN PIPE SHALL BE OF THE SIZE AND TYPE SHOWN ON THE PLANS. 2", TYPE "K" COPPER, SHALL BE IN ACCORDANCE WITH AWWA C-151, C-104, AND C-111.
5. ALL WATER MAIN THRUST BLOCKS SHALL BE CONSTRUCTED OF 3,500 PSI CONCRETE.
6. THE WATER MAINS SHALL HAVE A MINIMUM DEPTH OF COVER OF 6'.
7. ANY SURFACES, LINES, OR STRUCTURES WHICH HAVE BEEN DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO A CONDITION AT LEAST EQUAL TO THAT IN WHICH THEY WERE FOUND IMMEDIATELY PRIOR TO THE BEGINNING OF CONSTRUCTION.
8. THE CONTRACTOR SHALL COORDINATE THE LOCATION AND INSTALLATION OF THE INDIVIDUAL LOT WATER LINE SERVICES WITH THE OWNER AT THE TIME OF CONSTRUCTION.
9. NO WATER LINES SHALL BE INSTALLED AFTER NOVEMBER 15 OR BEFORE APRIL 1 WITHOUT PRIOR APPROVAL OF THE SUPERINTENDENT. THE APPROPRIATE CWD SUPERVISOR MAY RESTRICT WORK BEFORE NOVEMBER 15 AND AFTER APRIL 1 DURING ADVERSE WEATHER CONDITIONS.
10. INSULATION IS RECOMMENDED WHEN THE SANITARY OR STORM SEWERS ARE ABOVE THE WATER MAIN.



INDIVIDUAL DRIVEWAY DETAIL

NTS



1) PRIOR TO INSTALLING THE GRAVEL, THE CONTRACTOR SHALL CONTACT THE ENGINEER, 24 HOURS IN ADVANCE FOR INSPECTION OF THE SUBBASE SOILS. THE CONTRACTOR SHALL FURNISH A LOADED DUMPTRUCK FOR TRAVELLING ON THE SUBBASE WHEN THE ENGINEER PERFORMS THE INSPECTION. THE CONTRACTOR SHALL OVER-EXCAVATE IN UNSUITABLE SOILS AND ADD ADDITIONAL GRAVEL BASE AS REQUESTED BY THE ENGINEER.

2) THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE TOWN PUBLIC WORKS REQUIREMENTS, THE VERMONT DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS AND THE ENGINEERING PLANS AND SPECIFICATIONS.

3) DRIVEWAYS SHALL MATCH SWALE GRADING; 9" BELOW & 9' OFF THE EDGE OF PAVEMENT

ROAD CROSS-SECTION

NTS

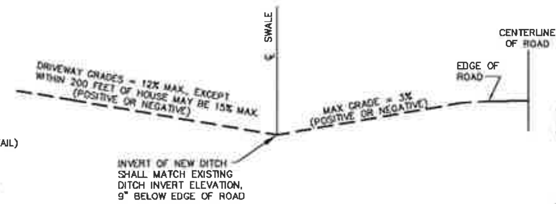
GRADATION REQUIREMENTS

MATERIAL	SIEVE SIZE	PERCENT (%) PASSING
SAND CUSHION – VT SPEC 703.03	2"	100 %
	1 1/2"	90-100 %
	1/2"	70-100 %
	#4	60-100 %
	#100	0-20 %
	#200	0-8%
GRAVEL FOR SUBBASE – VT SPEC 704.04	#4	20-60 %
	#100	0-12 %
	#200	0-6%
CRUSHED GRAVEL FOR SUBBASE VT SPEC 704.05	2"	100 %
	1 1/2"	90-100 %
	#4	30-60 %
	#100	0-12 %
	#200	0-5 %
DENSE GRADED CRUSHED STONE VT SPEC 704.06	3 1/2"	100 %
	3"	90-100%
	2"	75-100%
	1"	50-80%
	1/2"	30-60%
	#4	15-40%
	#200	0-6 %

GRADATION REQUIREMENTS

GENERAL CONSTRUCTION SPECIFICATIONS

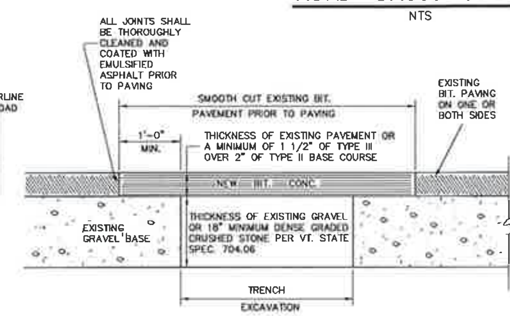
1) UTILITY INFORMATION SHOWN HEREON WAS OBTAINED FROM BEST AVAILABLE SOURCE AND MAY OR MAY NOT BE EITHER ACCURATE OR COMPLETE. CONTRACTOR SHALL VERIFY EXACT LOCATION OF EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, SHOWN OR NOT SHOWN HEREON. CONTRACTOR SHALL VERIFY NEW TAP LOCATIONS AND SHALL CONNECT ALL UTILITIES TO NEAREST SOURCE THROUGH COORDINATION WITH UTILITY OWNER.
2) THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND REMOVAL OF ALL EXISTING VEGETATION, PAVEMENT, AND STRUCTURES NECESSARY TO COMPLETE THE WORK UNLESS NOTED ON THESE PLANS. CONTRACTOR SHALL REMOVE ALL TRASH FORM SITE UPON COMPETION OF CONSTRUCTION. ANY SURFACES, LINES OR STRUCTURES WHICH HAVE BEEN DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO A CONDITION AT LEAST EQUAL TO THAT IN WHICH THEY WERE FOUND IMMEDIATELY PRIOR TO BEGINNING OF CONSTRUCTION.
3) SEE OTHER DETAIL SHEETS OF THESE PLANS FOR ADDITIONAL DETAILS, REQUIREMENTS AND SPECIFICATIONS.
4) ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE TOWN PUBLIC WORKS SPECIFICATIONS, AND THESE PLANS.
5) A MINIMUM OF ONE-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. CONTINUOUS TWO-WAY TRAFFIC WILL BE REQUIRED AT NIGHT, PEAK-HOURS, AND WHENEVER POSSIBLE DURING ACTUAL CONSTRUCTION ACTIVITIES. IF DEEMED NECESSARY BY THE OWNER, MUNICIPALITY OR ENGINEER, A UNIFORMED TRAFFIC CONTROL OFFICER SHALL DIRECT TRAFFIC DURING PEAK HOURS. TEMPORARY CONSTRUCTION SIGNS AND TRAFFIC CONTROL SIGNS SHALL BE ERECTED BY THE CONTRACTOR IN ACCORDANCE WITH STATE AND TOWN STANDARDS.
6) THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS OWN EXPENSE FOR ENSURING THAT THE DUST CREATED AS A RESULT OF CONSTRUCTION DOES NOT CREATE A NUISANCE OR SAFETY HAZARD. WHERE AND WHEN DEEMED NECESSARY, THE CONTRACTOR WILL BE REQUIRED TO WET SECTIONS OF THE CONSTRUCTION AREA WITH WATER, APPLY CALCIUM CHLORIDE, OR SWEEP THE ROADWAY WITH A POWER BROOM FOR DUST CONTROL.
7) THE CONTRACTOR SHALL NOTIFY THE ENGINEER 24 HOURS IN ADVANCE OF STARTING ANY WORK, CUTTING PAVEMENT, BEGINNING THE INSTALLATION OF ANY UTILITIES, BRINGING IN ANY NEW GRAVEL OR STONE FOR THE NEW BASE, PAVING, ALL TESTING, AND FINAL INSPECTION, IN ORDER TO ASSURE COMPLIANCE WITH THE PLANS.
8) PRIOR TO BEGINNING CONSTRUCTION, ALL MATERIALS SHALL BE APPROVED BY THE ENGINEER.
9) ALL FILL SHALL BE PLACED IN 6 INCH LIFTS AND THOROUGHLY COMPACTED TO 95% OF MAXIMUM DENSITY OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698 STANDARD PROCTOR, AND SHALL BE TESTED AT 500' INTERVALS, UNLESS OTHERWISE SPECIFIED.
10) BACKFILL UNDER PIPES IN FILL AREAS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY OF OPTIMUM MOISTURE CONTENT. A MINIMUM OF TWO (2) COMPACTION TESTS SHALL BE TAKEN AT THE CONTRACTOR'S EXPENSE, UNDER EACH RUN OF PIPE PRIOR TO INSTALLING THE PIPES. THE PIPES SHALL ONLY BE INSTALLED OVER ADEQUATELY COMPACTED SOILS.
11) THE HAYBALE DAMS, SILT FENCES, AND DITCHES SHALL BE MAINTAINED AND REPAIRED BY THE CONTRACTOR AFTER EVERY RAINFALL OR AS ORDERED BY THE ENGINEER UNTIL ALL DISTURBED AREAS HAVE BEEN PAVED OR GRASSED AND APPROVED BY THE ENGINEER. THE MAINTENANCE OF THE EROSION CONTROL DEVICES WILL INCLUDE THE REMOVAL OF ANY ACCUMULATED SEDIMENTATION.
12) THIS DESIGN MUST BE INSPECTED BY O'LEARY-BURKE CIVIL ASSOCIATES, PLC, ESSEX JUNCTION, VERMONT. TO ENSURE COMPLIANCE WITH THESE PLANS, O'LEARY-BURKE WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS THAT ARISE FROM FAILURE TO FOLLOW THESE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THAT THE PLANS CONVEY, AND FROM FAILURE TO HAVE BEEN NOTIFIED BY THE CONTRACTOR TO INSPECT THE WORKS AND TESTS IN PROGRESS.
13) ALL SLOPES, DITCHES AND DISTURBED AREAS SHALL BE GRADED SMOOTH, CLEAN AND FREE OF POCKETS WITH SUFFICIENT SLOPE TO ENSURE DRAINAGE.



SECTION A-A

TYPICAL DRIVEWAY DETAIL

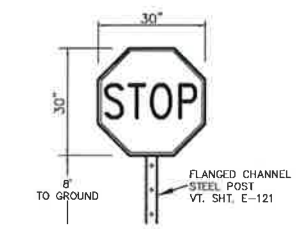
NTS



1. SETUP AND MAINTAIN SIGNS AND OTHER SAFETY CONTROL DEVICES.
2. RESHAPE HOLE AND PATCH AREA BY CUTTING WITH CONCRETE SAW INTO A SQUARE OR RECTANGULAR SHAPE. CUT SIDE FACES VERTICALLY. RESHAPE DOWNWARD TO SOLID MATERIAL AND AROUND HOLE TO SOLID PAVEMENT.
3. BACKFILL TRENCH IN 6" LIFTS AND COMPACT EACH LIFT TO 95% OF MAXIMUM DENSITY OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698 STANDARD PROCTOR.
4. REMOVE ALL LOOSE MATERIAL AND THOROUGHLY SWEEP THE HOLE AREA CLEAN OF MUD AND STANDING WATER.
5. APPLY LIQUID EMULSION (RS-1) TO VERTICAL FACES IN A UNIFORM MANNER. DO NOT PUDDLE EMULSION ON BOTTOM OF THE HOLE.
6. PLACE TYPE II BASE COURSE PAVEMENT A MINIMUM OF 2" THICK.
7. FILL TOP OF HOLE WITH TYPE III BITUMINOUS CONCRETE AND COMPACT IN LIFTS OF NO MORE THAN 2". FINAL LIFT SHOULD BE 1/2" TO 1" ABOVE ADJOINING PAVEMENT BEFORE COMPACTION SO THAT AFTER COMPACTION THE PATCH IS LEVEL WITH THE EXISTING PAVEMENT. EACH LIFT SHOULD BE THOROUGHLY COMPACTED WITH A VIBRATORY PLATE COMPACTOR OR A VIBRATORY PORTABLE ROLLER. EXPERIENCE HAS SHOWN THAT 15 TO 20 PASSES ARE REQUIRED WITH A VIBRATORY ROLLER AND A MIX TEMPERATURE ABOVE 250 DEGREES F ARE NECESSARY TO ENSURE GOOD COMPACTION. HAND TAMP SHOULD ONLY BE USES FOR SMALL AREAS (LESS THAN 1 S.F.).
8. CLEANUP AREA. DO NOT LEAVE EXCESS FILL OR EXCAVATED MATERIAL ON THE PAVEMENT. REMOVE SAFETY SIGNS AND DEVICES.

REPLACEMENT OF EXISTING BITUMINOUS PAVEMENT

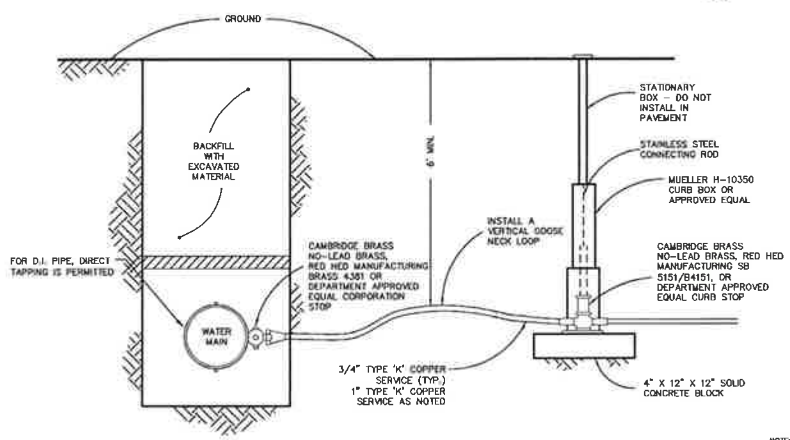
NTS



STOP SIGN

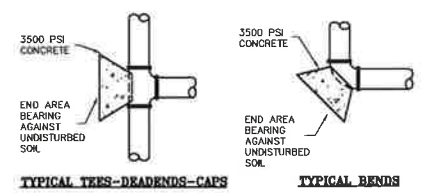
N.T.S. VT. SHT. E-143

THE CONTRACTOR SHALL INSTALL STOP SIGNS AT THE INTERSECTION OF THE PROJECT AND BROWNS TRACE ROAD.



WATER SERVICE DETAIL

NTS



NOTE: PLACE 4 mil POLYETHYLENE BETWEEN FITTING AND THRUST BLOCK

BASED ON 100 PSI WORKING PRESSURE PLUS 100 PSI SURGE ALLOWANCE AND BEARING CAPACITY OF 2000 LBS/SQ FT

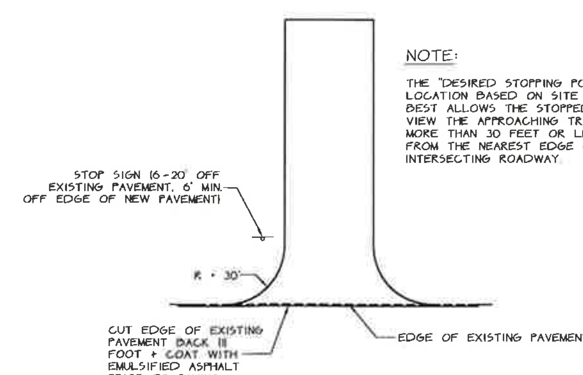
FITTING \ SIZE	6"	8"	12"
11¼ & 22½	2	2	5
45°	2	4	9
90°	4	8	17
TEES OR END CAPS	3	6	12
VALVES	2	2	2

SQ FT BEARING AREA

NOTE: THRUST BLOCKS SHALL BE INSTALLED AT ALL BENDS, TEES & REDUCERS

THRUST BLOCK END AREA

NTS

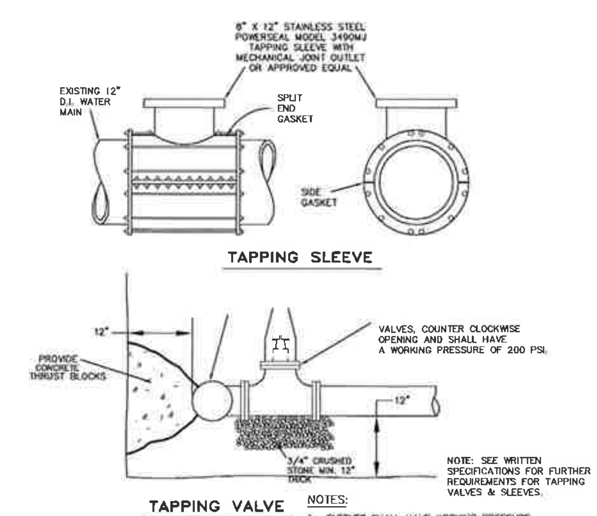


NOTE:

THE "DESIRED STOPPING POINT" IS THE LOCATION BASED ON SITE CONDITIONS THAT BEST ALLOWS THE STOPPED VEHICLE TO VIEW THE APPROACHING TRAFFIC. IN NO CASE MORE THAN 30 FEET OR LESS THAN 4 FEET FROM THE NEAREST EDGE OF THE INTERSECTING ROADWAY.

INTERSECTION DETAIL

NTS

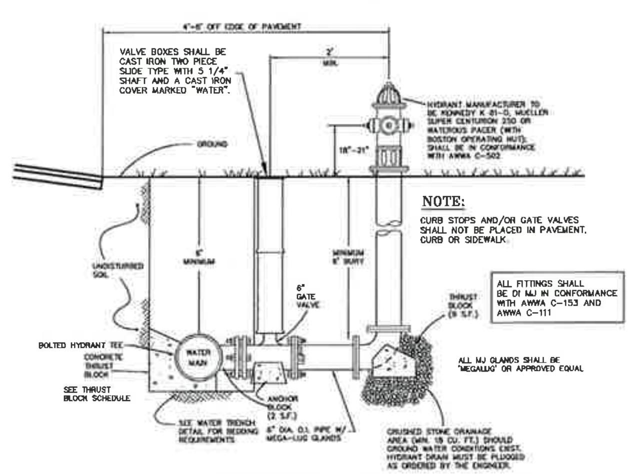


NOTE: SEE WRITTEN SPECIFICATIONS FOR FURTHER REQUIREMENTS FOR TAPPING VALVES & SLEEVES.

NOTES:
1. SLEEVES SHALL HAVE WORKING PRESSURE OF 200 PSI.
2. ALL EXTERIOR EXPOSED SURFACES SHALL BE FUSION BOUNDED, EPOXY-COATED TO A MIN. 10 MIL THICKNESS
3. UPON FINAL TIGHTENING AND TESTING ALL BOLTS SHALL BE BRUSH COATED WITH BITUMASTIC COLD APPLIED MATERIAL TO ALL EXPOSED NUTS & BOLTS.

TAPPING VALVE AND SLEEVE DETAIL

NTS



NOTE:

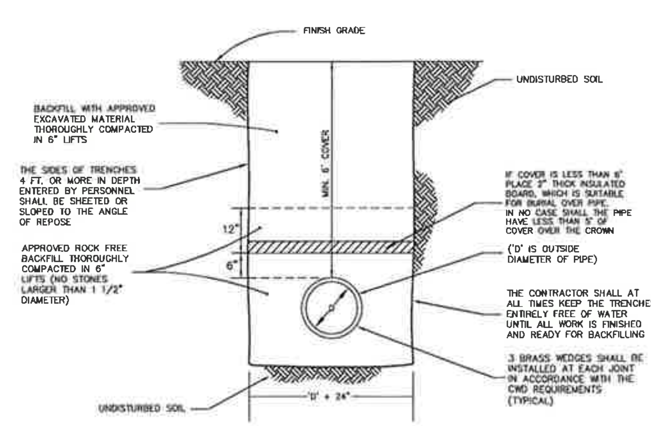
CURB STOPS AND/OR GATE VALVES SHALL NOT BE PLACED IN PAVEMENT, CURB OR SIDEWALK.

ALL FITTINGS SHALL BE DI MJ IN CONFORMANCE WITH AWWA C-153 AND AWWA C-111

HYDRANT

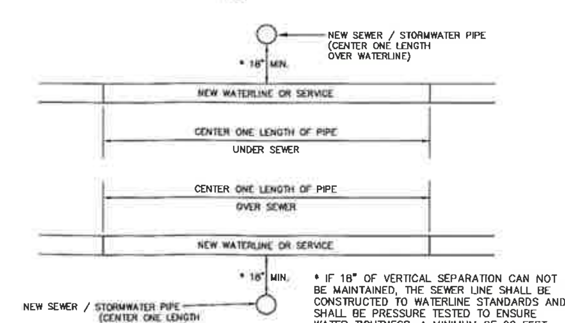
NTS

NOTE: THE DRAIN RING SHALL BE PLUGGED WHEN THE HYDRANT IS INSTALLED, ONLY IF GROUNDWATER IS ENCOUNTERED.



WATER TRENCH

NTS



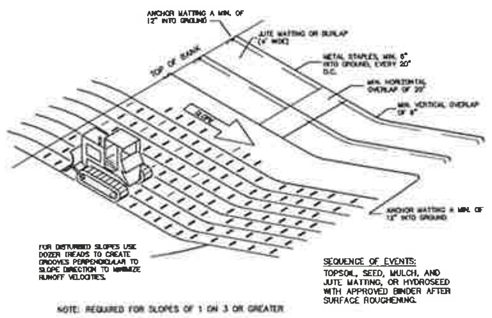
* IF 18" OF VERTICAL SEPARATION CAN NOT BE MAINTAINED, THE SEWER LINE SHALL BE CONSTRUCTED TO WATERLINE STANDARDS AND SHALL BE PRESSURE TESTED TO ENSURE WATER TIGHTNESS, A MINIMUM OF 20 FEET BEYOND EACH SIDE OF THE CROSSING.

SEPARATION DETAIL FOR CROSSINGS

NTS

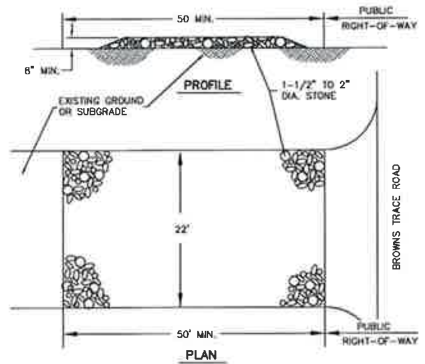
THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.

DATE	REVISION			BY
SURVEY OBCA	☐ RECORD DRAWING ☐ PRELIMINARY	A Planned Unit Development		DATE 3/20/16
DESIGN OBCA	■ FINAL ☐ SKETCH/CONCEPT	VT Route 15 / 3 Raceway Road – Jericho, VT		JOB # 2015-81
DRAWN PFH	O'LEARY-BURKE CIVIL ASSOCIATES, PLC	Road + Water		FILE 2015-81-S1
CHECKED DWB	13 CORPORATE DRIVE ESSEX JCT., VT PHONE: 878-9990 FAX: 878-9989 E-MAIL: obca@olearyburke.com	Details + Specifications		PLAN SHEET # 5
SCALE 1" = 60'				



SLOPE RESTORATION

NTS

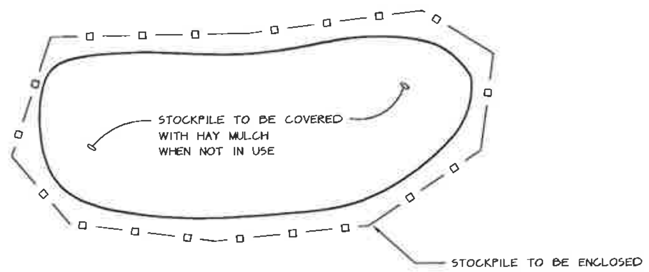


NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT TRACKED, SPILLED, OR WASHED ONTO PUBLIC RIGHTS-OF-WAY SHALL BE REMOVED IMMEDIATELY BY CONTRACTOR.
2. THE USE OF CALCIUM CHLORIDE OR WATER MAY BE NECSSARY TO CONTROL DUST DURING THE SUMMER.
3. PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC RIGHT-OF-WAY.

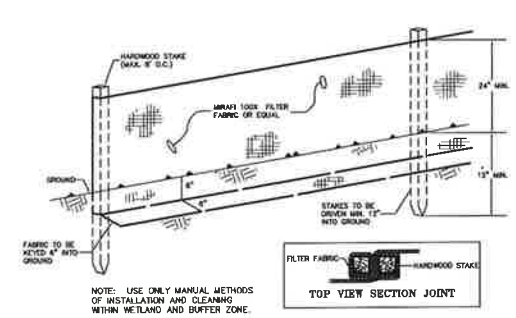
STABILIZED CONSTRUCTION ENTRANCE

NTS



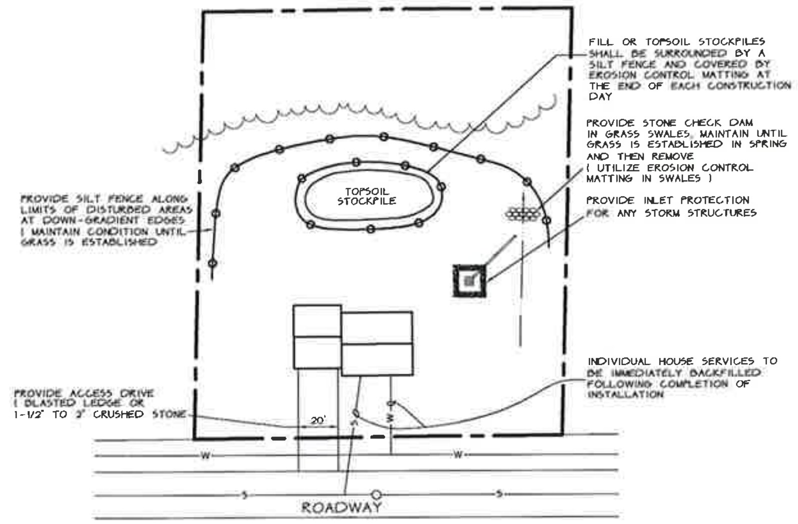
TEMPORARY FILL MATERIAL STOCKPILE

NTS



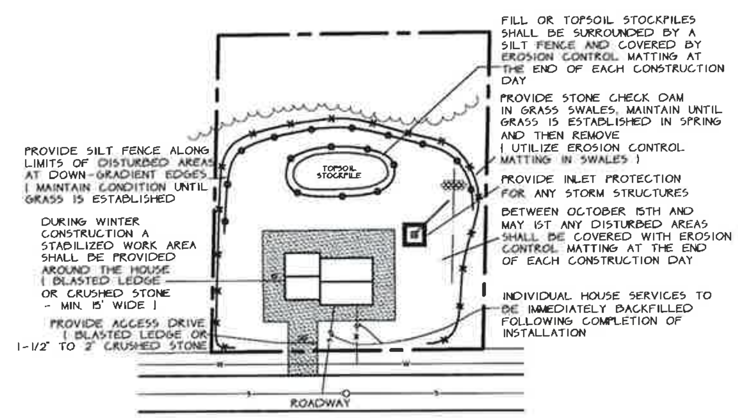
TEMPORARY SILT FENCE

NTS



INDIVIDUAL LOT EROSION AND SEDIMENT CONTROL (FOR SUMMER CONSTRUCTION)

NTS



INDIVIDUAL LOT EROSION AND SEDIMENT CONTROL (FOR WINTER CONSTRUCTION)

NTS

EROSION AND SEDIMENT CONTROL SEQUENCING :

(WINTER STABILIZATION WORK TO BE COMPLETED PRIOR TO OCTOBER 15)

1. CONSTRUCTION FENCING TO BE INSTALLED TO MINIMIZE THE AREA TO BE DISTURBED.
2. SILT FENCING TO BE INSTALLED AT DOWN-GRADIENT LOCATIONS TO PREVENT ANY SILT FROM EXITING SITE.
3. INSTALL STONE ACCESS ONTO SITE.
4. STONE CHECK DAM(S) TO BE INSTALLED IN SWALES (AS NECESSARY).
5. EXCAVATE FOR FOUNDATION, STOCKPILE FILL AND/OR TOPSOIL AND SURROUND WITH SILT FENCING. WITHIN 24 HOURS PROVIDE MULCH OR EROSION CONTROL MATTING OVER STOCKPILES.
6. INSTALL HOUSE SERVICES AND BACKFILL ALL EXCAVATIONS. PROVIDE STABILIZED WORK AREA AROUND HOUSE.
7. EROSION CONTROL MATTING TO BE UTILIZED IN DRAINAGE SWALES AND ALL DISTURBED AREAS ON SITE.
8. EROSION CONTROL MEASURES TO BE INSPECTED AND MAINTAINED DURING THE CONSTRUCTION PERIOD.
9. AS EARLY AS POSSIBLE IN THE SPRING, THE FINISH SITE GRADING, TOPSOILING AND SEEDING WILL BE COMPLETED. THE EROSION CONTROL MEASURES ARE TO BE MAINTAINED UNTIL GRASS IS ESTABLISHED.

MULCHING SPECIFICATIONS

DISTURBED AREAS ARE TO BE MULCHED WITHIN A WEEK OF DISTURBANCE. HAY MULCH SHALL BE SPREAD UNIFORMLY OVER THE AREA AT A RATE OF TWO TONS PER ACRE OR AT A RATE THAT IS SUFFICIENT TO PROVIDE ADEQUATE COVERAGE.

WHERE FINISH GRADE AND TOPSOILED, SEEDING AND MULCHING IS TO BE APPLIED WITHIN 48 HOURS.

SNOW MANAGEMENT PLAN :

FOLLOWING THE ACCUMULATION OF ANY SNOW FALL EVENT WHICH GENERATES MORE THAT 1" OF SNOW OR ICE THE SITE SHALL BE CLEARED AND ALL SNOW AND ICE STORED IN THE IDENTIFIED SNOW STORAGE AREAS ON THE EPSC CONSTRUCTION PLANS. ALL SNOW STORAGE AREAS SHALL BE DOWN GRADIENT OF ANY DISTURBED AREAS AND THE STORAGE OF SNOW IN STORMWATER TREATMENT STRUCTURES IS PROHIBITED.

WINTER CONSTRUCTION REQUIREMENTS

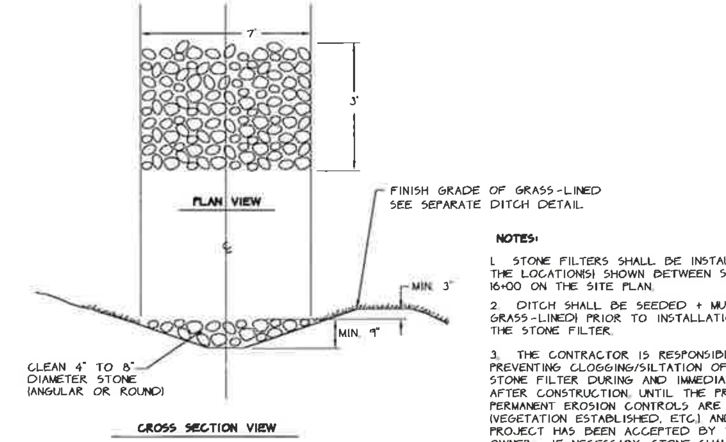
1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL.
2. PROVIDE ENLARGED ACCESS POINTS, STABILIZED TO PROVIDE FOR SNOW STOCKPILING.
3. A MINIMUM 25 FT BUFFER SHALL BE MAINTAINED FROM PERIMETER CONTROLS SUCH AS SILT FENCE.
4. DRAINAGE STRUCTURES MUST BE KEPT OPEN AND FREE OF SNOW AND ICE DAMS.
5. SILT FENCE AND OTHER PRACTICES REQUIRING EARTH DISTURBANCE MUST BE INSTALLED AHEAD OF FROM GROUND.
6. MULCH USED FOR TEMPORARY STABILIZATION MUST BE APPLIED AT DOUBLE THE STANDARD RATE, OR A MINIMUM OF 3 INCHES WITH AN 80-90% COVER.
7. TO ENSURE COVER OF DISTURBED SOIL IN ADVANCE OF A MELT EVENT, AREAS OF DISTURBED SOIL MUST BE STABILIZED AT THE END OF EACH WORK DAY, WITH THE FOLLOWING EXCEPTIONS:
   - IF NO PRECIPITATION WITHIN 24 HOURS IS FORECAST AND WORK WILL RESUME IN THE SAME DISTURBED AREA WITHIN 24 HOURS, DAILY STABILIZATION IS NOT NECESSARY.
   - DISTURBED AREAS THAT COLLECT AND RETAIN RUNOFF, SUCH AS HOUSE FOUNDATIONS OR OPEN UTILITY TRENCHES.
8. PRIOR TO STABILIZATION, SNOW OR ICE MUST BE REMOVED TO LESS THAN 1 INCH THICKNESS.
9. USE STONE TO STABILIZE AREAS SUCH AS THE PERIMETER OF BUILDINGS UNDER CONSTRUCTION OR WHERE CONSTRUCTION VEHICLE TRAFFIC IS ANTICIPATED. STONE PATHS SHOULD BE 10-20 FEET WIDE TO ACCOMMODATE VEHICULAR TRAFFIC.
10. IN AREAS OF DISTURBANCE THAT DRAIN TO A WATER BODY WITHIN 100 FEET, TWO ROWS OF SILT FENCE MUST BE INSTALLED ALONG THE CONTOUR.

WINTER INSPECTION SCHEDULE	AFTER A THAW OR A RAINFALL GENERATING RUNOFF FROM SITE
INSPECT SILT FENCING WITH SKI TAPE	X
INSPECT AREAS TEMPORARILY MULCHED	X
INSPECT TEMPORARY STOCKPILES	X
INSPECT STABILIZED CONSTRUCTION ENTRANCES	X
INSPECT AREAS THAT HAVE BEEN TOPSOILED + MULCHED	X
INSPECT STORMWATER SWALES, SPREADERS, OUTFLOW DEVICES	X

STUMP DISPOSAL SPECIFICATIONS

ALL SUITABLE TREES THAT MUST BE CUT WILL BE USED AS FIREWOOD. THE STUMPS, BRUSH + EXCESS UNSUITABLE EARTH WILL BE DISPOSED OF AT THE LOCATION DESIGNATED BY THE ENGINEER, CONTINGENT UPON APPROVAL FROM THE TOWN BUILDING INSPECTOR. SAID AREA(S) SHALL BE A MINIMUM OF TWO FEET ABOVE THE SEASONAL HIGH GROUNDWATER OR THE STUMPS SHALL BE HAULED OFF-SITE TO A STATE-APPROVED LANDFILL. IF ON-SITE STUMP DISPOSAL IS IMPLEMENTED, THE FOLLOWING GUIDELINES SHALL BE MET:

1. WHENEVER POSSIBLE, STUMP DISPOSAL SITES SHOULD BE LOCATED ON NEARLY LEVEL TO MODERATELY SLOPING LANDS (SLOPES LESS THAN 12%).
2. DISPOSAL SITES WILL NOT BE LOCATED IN OR WITHIN 100 FEET OF FLOWING WATERCOURSES OR STREAMS OR IN ACTIVELY ERODING GULLIES.
3. DISPOSAL SITES SHALL NOT BE LOCATED IN FLOODED OR FLOOD-PRONE LANDS, MARSHES, OR OTHER AQUIFER RECHARGE AREAS.
4. STUMPS WILL BE PLACED ON THE SITE IN A SINGLE LIFT PRIOR TO BACKFILLING. WHEN ADDITIONAL STUMPS ARE TO BE DEPOSITED ON THE SAME SITE, EACH SUCCESSIVE LAYER OR LIFT OF STUMPS WILL BE BACKFILLED.
5. STUMPS DEPOSITED IN DRAINAGEWAYS OR DEPRESSIONS SHALL BE BACKFILLED AND BERMED SO AS TO DIVERT OVERLAND FLOWS FROM THE DISPOSAL AREA.
6. A MINIMUM OF TWO FEET (2') OF OVERBURDEN WILL BE PLACED OVER ALL DISPOSAL SITES.
7. THE TWO FEET OF OVERBURDEN WILL BE COVERED WITH A MINIMUM OF FOUR INCHES (4") OF TOPSOIL, GRADED, SEEDED, AND MULCHED IN ACCORDANCE WITH THE SPECIFICATIONS.



NOTES:

1. STONE FILTERS SHALL BE INSTALLED AT THE LOCATION(S) SHOWN BETWEEN STA. 14+00 - 16+00 ON THE SITE PLAN.
2. DITCH SHALL BE SEEDED + MULCHED (IF GRASS-LINED) PRIOR TO INSTALLATION OF THE STONE FILTER.
3. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING CLOGGING/SILTATION OF THE STONE FILTER DURING AND IMMEDIATELY AFTER CONSTRUCTION, UNTIL THE PROJECT'S PERMANENT EROSION CONTROLS ARE IN PLACE (VEGETATION ESTABLISHED, ETC.) AND THE PROJECT HAS BEEN ACCEPTED BY THE OWNER. IF NECESSARY, STONE SHALL BE CLEANED OR REPLACED.

STONE CHECK DAM DETAIL

NTS

THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.

EROSION CONTROL SPECIFICATIONS

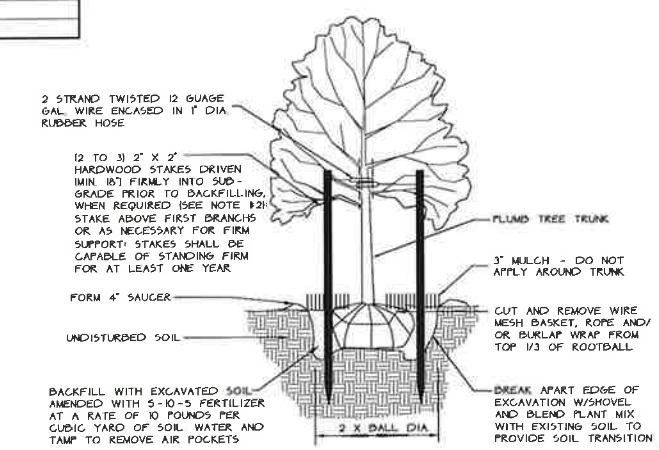
1. SEE OTHER DRAWINGS OF THESE PLANS FOR ADDITIONAL STORMWATER AND EROSION CONTROL SPECIFICATIONS AND DETAILS.
2. THE ROADWAY AND YARD FINISH GRADE SLOPES SHALL NOT BE STEEPER THAN 3 ON 1. THE FINISHED GRADE SLOPES SHALL BE IMMEDIATELY GRADED AND MULCHED.
3. ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEEDING AND MULCHING PRIOR TO NOVEMBER 1 OF EACH YEAR. ANY DISTURBED AREAS OUTSIDE OF THE ROADWAY SHALL BE IMMEDIATELY SEEDED AND MULCHED WITHIN 15 DAYS.
4. THE EROSION CONTROL METHODS USED DURING CONSTRUCTION OF THE DEVELOPMENT SHALL PROCEED IN THE FOLLOWING SEQUENCE:
   A) THE CONTRACTOR SHALL INSTALL AND MAINTAIN HAY BALE DAMS, SILT FENCES, AND OTHER EROSION CONTROL MEASURES, IF REQUIRED, AS ORDERED BY THE ENGINEER. THE EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AFTER EVERY RAINFALL UNTIL THE NEW IMPROVEMENTS ARE PAVED AND ALL DISTURBED AREAS HAVE BEEN GRASSED. THE REPAIR OF THE EROSION CONTROL MEASURES WILL INCLUDE REMOVING ANY SEDIMENTATION. THE SEDIMENT MAY BE PLACED AS FILL IN THE LOW AREAS, IF APPROVED BY THE ENGINEER.
   B) THE TOPSOIL SHALL BE REMOVED FROM THE AREAS TO BE GRADED AND STOCKPILED. A SILT FENCE SHALL BE PLACED CONTINUOUSLY AROUND THE BOTTOM OF THE PILE.
   C) IN AREAS NEAR THE NEW CONSTRUCTION, THE CONTRACTOR SHALL ENCLOSE THE TRUNKS OF TREES TO BE SAVED WITH WOODEN SNOW FENCING ALONG THE DRIPLINE TO PROTECT THE FROM INJURY.
   D) THE SITE GRADING WILL THEN BE DONE, AND THE PIPELINES WILL BE INSTALLED IMMEDIATELY FOLLOWING GRADING. THE CONTRACTOR WILL INSTALL AND MAINTAIN HAY BALE INLET PROTECTION AROUND THE CATCH BASINS UNTIL THE ROADWAY HAS BEEN PAVED AND GRASS HAS BEEN ESTABLISHED ON THE SLOPES.
   E) THE CONTRACTOR WILL TOPSOIL, SEED, AND MULCH THE DISTURBED AREAS AS SOON AS POSSIBLE FOLLOWING COMPLETION OF ADJACENT CONSTRUCTION.
   F) OPEN CUT AREAS SHALL BE MULCHED OUTSIDE OF ACTUAL WORK AREAS, AND HAY BALES SHALL BE EMPLOYED TO CONFINE SHEET WASH AND RUNOFF TO THE IMMEDIATE OPEN AREA AS ORDERED BY THE ENGINEER.
5. DURING CONSTRUCTION, THE PROJECT SHALL BE IN COMPLIANCE WITH THE LOW RISK SITE HANDBOOK FOR EROSION PREVENTION AND SEDIMENT CONTROL.

LANDSCAPING SPECIFICATIONS

ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEEDING AND MULCHING PRIOR TO NOVEMBER 1 OF EACH YEAR. ANY DISTURBED AREAS SHALL BE IMMEDIATELY SEEDED AND MULCHED WITHIN 15 DAYS. ANY WORK PERFORMED AFTER NOVEMBER 1 OF EACH YEAR SHALL BE STABILIZED WITH MULCH OR NETTING SUFFICIENT TO PREVENT EROSION AND SHALL BE IMMEDIATELY SEEDED AND REMULCHED AS SOON AS WEATHER PERMITS IN THE SPRING. ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 4" OF TOPSOIL AND BE SEEDED, FERTILIZED, LIMED, AND MULCHED IN ACCORDANCE WITH THE FOLLOWING:

1. SEED MIXTURE IN ALL AREAS SHALL BE URBAN MIX CONFORMING TO THE TABLE SHOWN ON THE PLANS. FOR SEEDING BETWEEN SEPTEMBER 1 AND NOVEMBER 1, WINTER RYE SHALL BE USED AT AN APPLICATION RATE OF 100 POUNDS PER ACRE.
2. FERTILIZER SHALL BE STANDARD COMMERCIAL GRADE CONFORMING TO THE STATE FERTILIZER LAW AND TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS. DRY FERTILIZER, IF USED, SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE. LIQUID FERTILIZER, IF USED, SHALL BE APPLIED IN A 1-2-1 RATIO WITH THE MINIMUM RATE TO INCLUDE 100 POUNDS OF NITROGEN, 200 POUNDS OF PHOSPHATE AND 100 POUNDS OF POTASH PER ACRE.
3. LIMESTONE SHALL CONFORM TO ALL STATE AND FEDERAL REGULATIONS AND TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS. THE LIMESTONE SHALL BE APPLIED AT A RATE OF TWO TONS PER ACRE OR AS DIRECTED.
4. WITHIN 24 HOURS OF APPLICATION OF FERTILIZER, LIME, AND SEED, THE SURFACE SHALL BE MULCHED WITH A HAY MULCH. MULCH SHALL BE SPREAD UNIFORMLY OVER THE AREA AT A RATE OF TWO TONS PER ACRE OR AS ORDERED BY THE ENGINEER.

URBAN MIX GRASS SEED		
% BY WEIGHT	LBS. LIVE SEED PER ACRE	TYPE OF SEED
37.5	45	CREEPING RED FESCUE
31.25	37.5	KENTUCKY BLUEGRASS
31.25	37.5	WINTER HARDY, PERENNIAL RYE
100	120 # LIVE SEED PER ACRE	

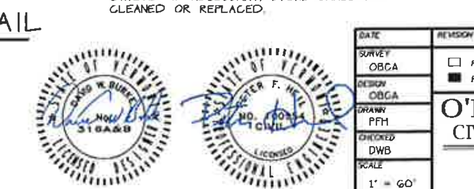


NOTE:

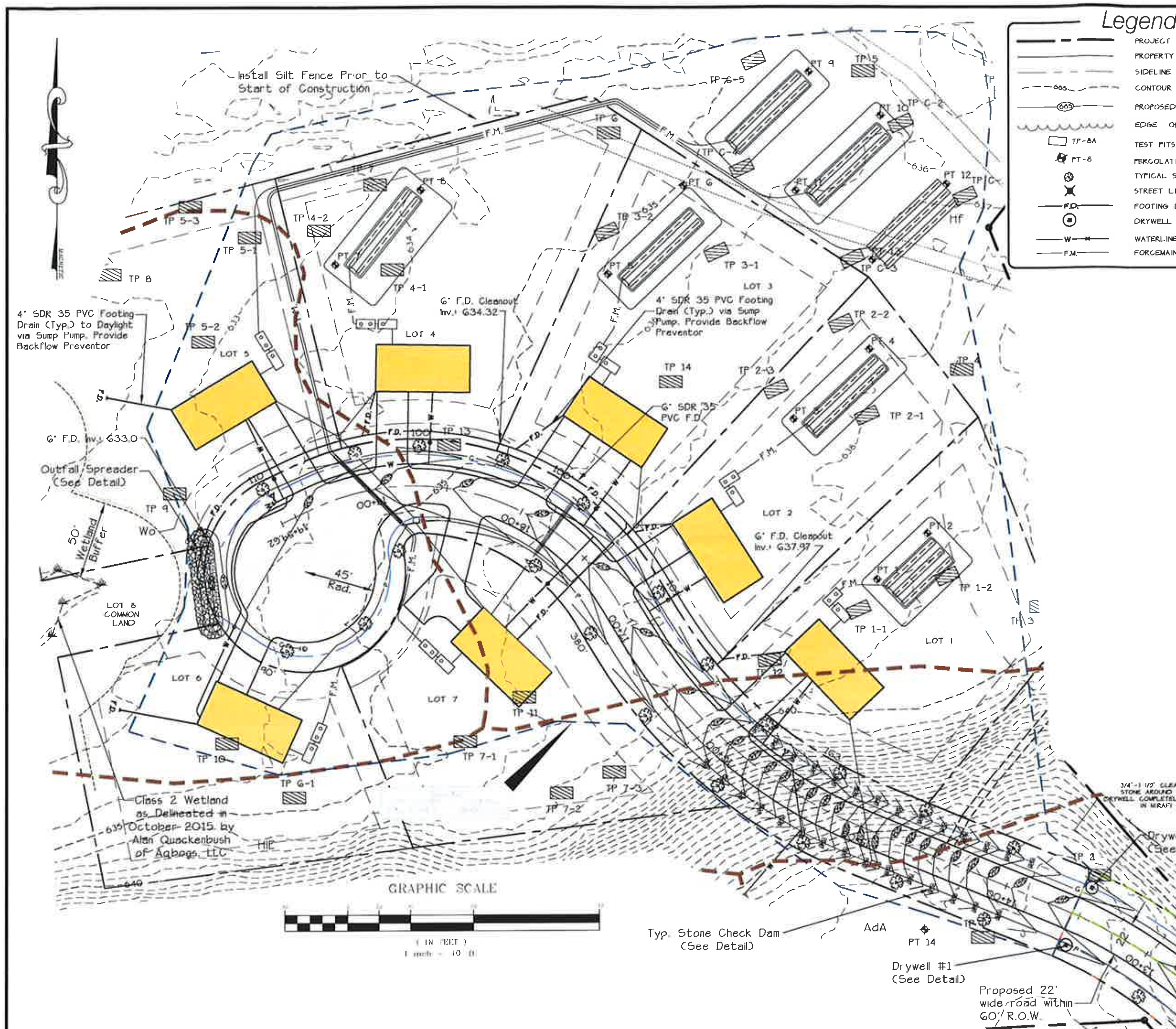
1. PLANT TREE SO THAT TOP OF ROOT BALL IS EVEN WITH THE FINISHED GRADE.
2. STAKING AS REQUIRED ONLY IN SITUATIONS WHERE TREES WILL BE SUBJECTED TO WINDY CONDITIONS AS DETERMINED BY THE PROJECT LANDSCAPE ARCHITECT.
3. TREES SHALL BE GUARANTEED FOR A PERIOD OF THREE YEARS AFTER PLANTING.
4. TREES SHALL BE A MIN. 2" DIAMETER, MEASURED AT A POINT FOUR FEET ABOVE FINISH GRADE.
5. EXAMINE ENTIRE TREE AND REMOVE ALL NURSERY TAGS, ROPE, STRING AND SURVEYOR TAPE PRIOR TO PLANTING TO PREVENT GIRDLING.

TREE PLANTING

NTS



DATE	REVISION	BY
SURVEY OBCA	☐ RECORD DRAWING ☐ PRELIMINARY ■ FINAL ☐ SKETCH/CONCEPT	DATE 3/20/16
DESIGN OBCA	O'LEARY-BURKE CIVIL ASSOCIATES, PLC	JOB # 2015-81
DRAWN PFH	13 CORPORATE DRIVE ESSEX JCT., VT PHONE: 878-9990 FAX: 878-9989 E-MAIL: obca@olearyburke.com	FILE 2015-81-S1
CHECKED DWB	A Planned Unit Development — VT Route 15 / 3 Raceway Road - Jericho, VT	PLAN SHEET # 6
SCALE 1" = 60'	Landscaping and Erosion + Sediment Control Details + Specifications	



Legend

	PROJECT BOUNDARY
	PROPERTY LINE
	SIDELINE OF EASEMENT
665	CONTOUR LINE (U.S.G.S. DATUM)
665	PROPOSED FINISH GRADE CONTOUR
	EDGE OF WOODED AREA
TP-8A	TEST PITS
PT-8	PERCOLATION TESTS
	TYPICAL STREET TREE
	STREET LIGHT
F.D.	FOOTING DRAIN
	DRYWELL
W	WATERLINE W/ GATE VALVE
F.M.	FORCEMAIN

STORMWATER NOTES:

1. THE GRASS CHANNELS AS SHOWN ON THIS PLAN ARE TO BE BUILT TO TO MEET THE 2002 VERMONT STORMWATER MANUAL FOR WATER QUALITY + RECHARGE REQUIREMENTS. THE GRASS CHANNELS HAVE BEEN CALCULATED TO PROVIDE A MIN. 10-MINUTE RESIDENCE TIME DURING THE WATER QUALITY (0.9" STORM EVENT) AS PART OF OBTAINING A STATE STORMWATER PERMIT, IT IS STRONGLY RECOMMENDED TO CONSULT WITH THE DESIGN ENGINEER DURING CONSTRUCTION TO ENSURE ALL NECESSARY COMPONENTS ARE IN PLACE FOR INITIAL COMPLIANCE AND ANNUAL INSPECTIONS REQUIRED AS MANDATED IN THE STORM PERMIT.
2. ALL NEW GRAVEL SURFACES SHALL BE GRADED TO THE GREATEST EXTENT POSSIBLE OR AS SHOWN HEREON TO DRAIN INTO A GRASS CHANNEL CHANNEL WITH OUTFLOW CONTROL STRUCTURE.
3. ANY QUESTIONS THAT ARISE ON THE PLAN RELATED TO THE ROAD, GRADES OR STORMWATER BEFORE OR DURING CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF O'LEARY-BURKE IMMEDIATELY AT (802) 878-9990.

PERCOLATION TEST RESULTS

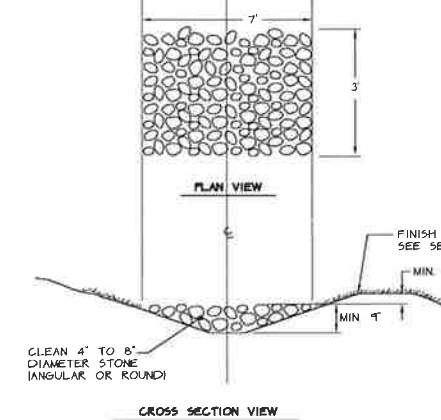
TESTS PERFORMED ON 01/12/16 BY JDY

TEST NUMBER	TEST DEPTH (INCHES)	PERCOLATION RATE (MINUTES/INCH)
PT 1	36	1.7 MIN./INCH
PT 2	36	1.3 MIN./INCH
PT 3	36	7.5 MIN./INCH
PT 4	36	2.1 MIN./INCH
PT 5	36	16.0 MIN./INCH
PT 6	36	2.4 MIN./INCH
PT 7	36	13.8 MIN./INCH
PT 8	36	12.8 MIN./INCH
PT 9	36	0.6 MIN./INCH
PT 10	36	2.0 MIN./INCH
PT 11	36	4.2 MIN./INCH
PT 12	36	1.9 MIN./INCH
PT 13	36	12.9 MIN./INCH
PT 14	36	1.1 MIN./INCH

SUMMARY OF SOIL TEST PIT LOGS

BACKHOE TEST PITS 1-1 – C-7 LOGGED BY DAVID W. BURKE ON 1/7/16 W/ BILL ZABOLOSKI
BACKHOE TEST PITS 1-14 LOGGED BY DAVID W. BURKE ON 8/31/15

TEST PIT NUMBER	EXISTING GROUNDWATER (DEPTH IN INCHES)	REDOXIMORPHIC FEATURES (DEPTH IN INCHES)	EXISTING LEDGE (DEPTH IN INCHES)
1-1	> 56	42	> 56
1-2	> 52	47	> 52
2-1	60	37	> 62
2-2	> 61	34	> 61
2-3	> 52	28	> 52
3-1	> 60	26	> 60
3-2	> 58	24	> 58
4-1	58	24	> 58
4-2	53	25	> 58
5-1	50	21	> 52
5-2	50	17	> 52
5-3	49	23	> 52
6-1	45	8	> 52
7-1	> 53	18	> 53
7-2	> 56	19	> 56
7-3	> 55	25	> 55
C-1	> 60	49	> 60
C-2	> 55	43	> 55
C-3	> 59	42	> 59
C-4	> 55	26	> 55
C-5	> 56	43	> 56
C-6	> 54	37	> 54
C-7	> 61	30	> 61
1	> 56	49	> 56
2	> 62	43	> 62
3	> 70	59	> 70
4	> 52	42	> 52
5	> 62	43	> 62
6	> 49	27	> 49
7	> 59	49	> 59
8	50	12	> 51
9	43	10	> 46
10	47	8	> 48
11	> 56	30	> 56
12	> 53	25	> 53
13	> 49	24	> 49
14	> 49	26	> 49

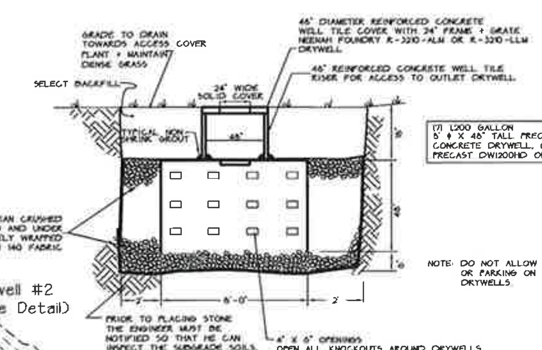


STONE CHECK DAM DETAIL

NTS

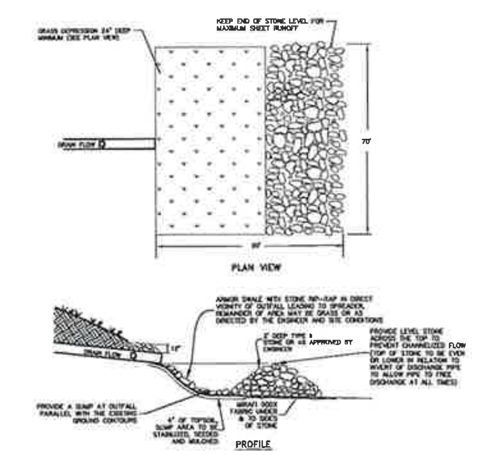
NOTES:

1. STONE FILTERS SHALL BE INSTALLED AT THE LOCATION(S) SHOWN ON THE SITE PLAN.
2. DITCH SHALL BE SEEDED + MULCHED (IF GRASS-LINED) PRIOR TO INSTALLATION OF THE STONE FILTER.
3. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING CLOGGING/SILTATION OF THE STONE FILTER DURING AND IMMEDIATELY AFTER CONSTRUCTION, UNTIL THE PROJECT'S PERMANENT EROSION CONTROLS ARE IN PLACE (VEGETATION ESTABLISHED, ETC.) AND THE PROJECT HAS BEEN ACCEPTED BY THE OWNER. IF NECESSARY, STONE SHALL BE CLEANED OR REPLACED.



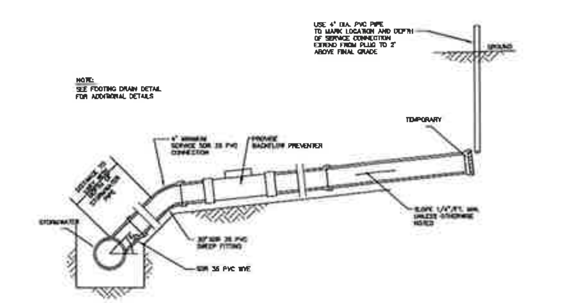
DRYWELL DETAIL

NTS



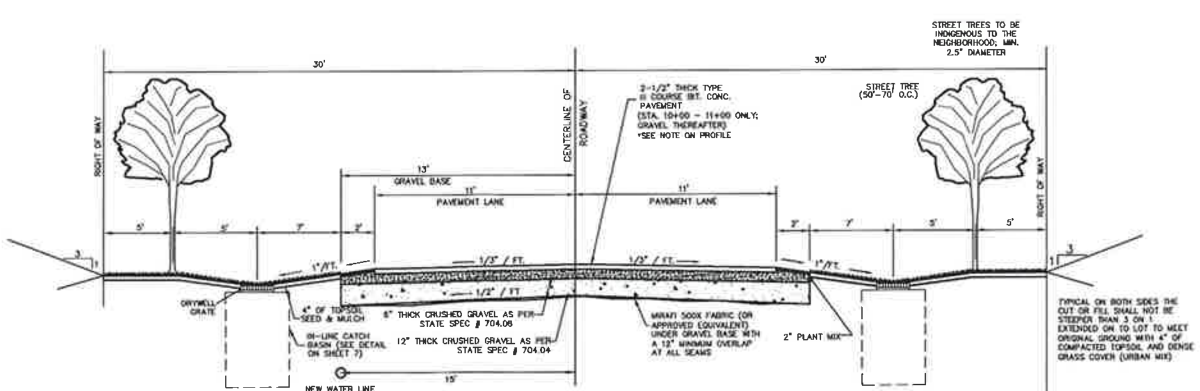
STORM INFILTRATION/OUTFALL DETAIL

NTS



FOOTING DRAIN CONNECTION

NTS



1) PRIOR TO INSTALLING THE GRAVEL, THE CONTRACTOR SHALL CONTACT THE ENGINEER, 24 HOURS IN ADVANCE FOR INSPECTION OF THE SUBBASE SOILS. THE CONTRACTOR SHALL FURNISH A LOADED DUMPTRUCK FOR TRAVELLING ON THE SUBBASE WHEN THE ENGINEER PERFORMS THE INSPECTION. THE CONTRACTOR SHALL OVER-EXCAVATE IN UNSUITABLE SOILS AND ADD ADDITIONAL GRAVEL BASE AS REQUESTED BY THE ENGINEER.
2) THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE TOWN PUBLIC WORKS REQUIREMENTS, THE VERMONT DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS AND THE ENGINEERING PLANS AND SPECIFICATIONS.
3) DRIVEWAYS SHALL MATCH SWALE GRADING; 9" BELOW & 9' OFF THE EDGE OF PAVEMENT

ROAD CROSS-SECTION

NTS

Soil Types

AdA	ADAMS + WINDSOR LOAMY SANDS, 0-5% SLOPES
Hf	HADLEY VERY FINE SANDY LOAM
HfE	HARTLAND VERY FINE SANDY LOAM, 25-60% SLOPES
Wo	WINOOSKI VERY FINE SANDY LOAM

THE CONTRACTOR SHALL NOTIFY "DIGSAFE" AT 1-888-DIG-SAFE PRIOR TO ANY EXCAVATION.

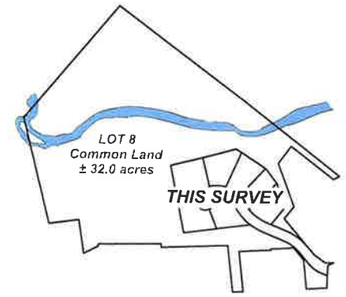
DATE	REVISION		BY
SURVEY: OBCA	☐ RECORD DRAWING ☐ PRELIMINARY ■ FINAL ☐ SKETCH/CONCEPT	A Planned Unit Development	DATE: 3/20/16
DESIGN: OBCA	O'LEARY-BURKE CIVIL ASSOCIATES, PLC	VT Route 15 / 3 Raceway Road - Jericho, VT	JOB #: 2015-81
DRAWN: PFH	13 CORPORATE DRIVE ESSEX JCT., VT PHONE: 878-9990 FAX: 878-9989 E-MAIL: obca@olearyburke.com	Stormwater Management Plan	FILE: 2015-81-S1
CHECKED: DWB			PLAN SHEET #: 7
SCALE: 1" = 60'			

CURVE COURSES

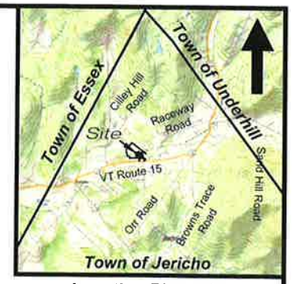
C1)	L=91.46'	R=180.00'
	C=90.48',	N55°13'06"W
C2)	L=126.80'	R=270.00'
	C=125.64',	N54°06'56"W
C3)	L=84.03'	R=330.00'
	C=83.80',	N60°16'29"W
C4)	L=126.09'	R=330.00'
	C=125.32',	N42°02'02"W
C5)	L=118.50'	R=120.00'
	C=113.74',	N59°22'41"W
C6)	L=19.72'	R=11.00'
	C=17.18',	S40°58'57"W
C7)	L=88.50'	R=64.00'
	C=81.62',	S29°14'56"W
C8)	L=89.60'	R=64.00'
	C=82.46',	N71°01'36"W
C9)	L=51.49'	R=64.00'
	C=50.11',	N07°52'19"W
C10)	L=55.01'	R=64.00'
	C=53.33',	N39°47'50"E
C11)	L=33.75'	R=180.00'
	C=33.70',	N69°47'30"E
C12)	L=100.13'	R=180.00'
	C=98.85',	S88°53'59"E
C13)	L=100.18'	R=180.00'
	C=98.89',	S57°01'10"E
C14)	L=31.38'	R=180.00'
	C=31.34',	S36°04'55"E
C15)	L=42.18'	R=270.00'
	C=42.13',	S35°33'48"E
C16)	L=129.74'	R=270.00'
	C=128.49',	S53°48'14"E
C17)	L=154.98'	R=330.00'
	C=153.56',	S54°06'56"E

SHORT LINE COURSES

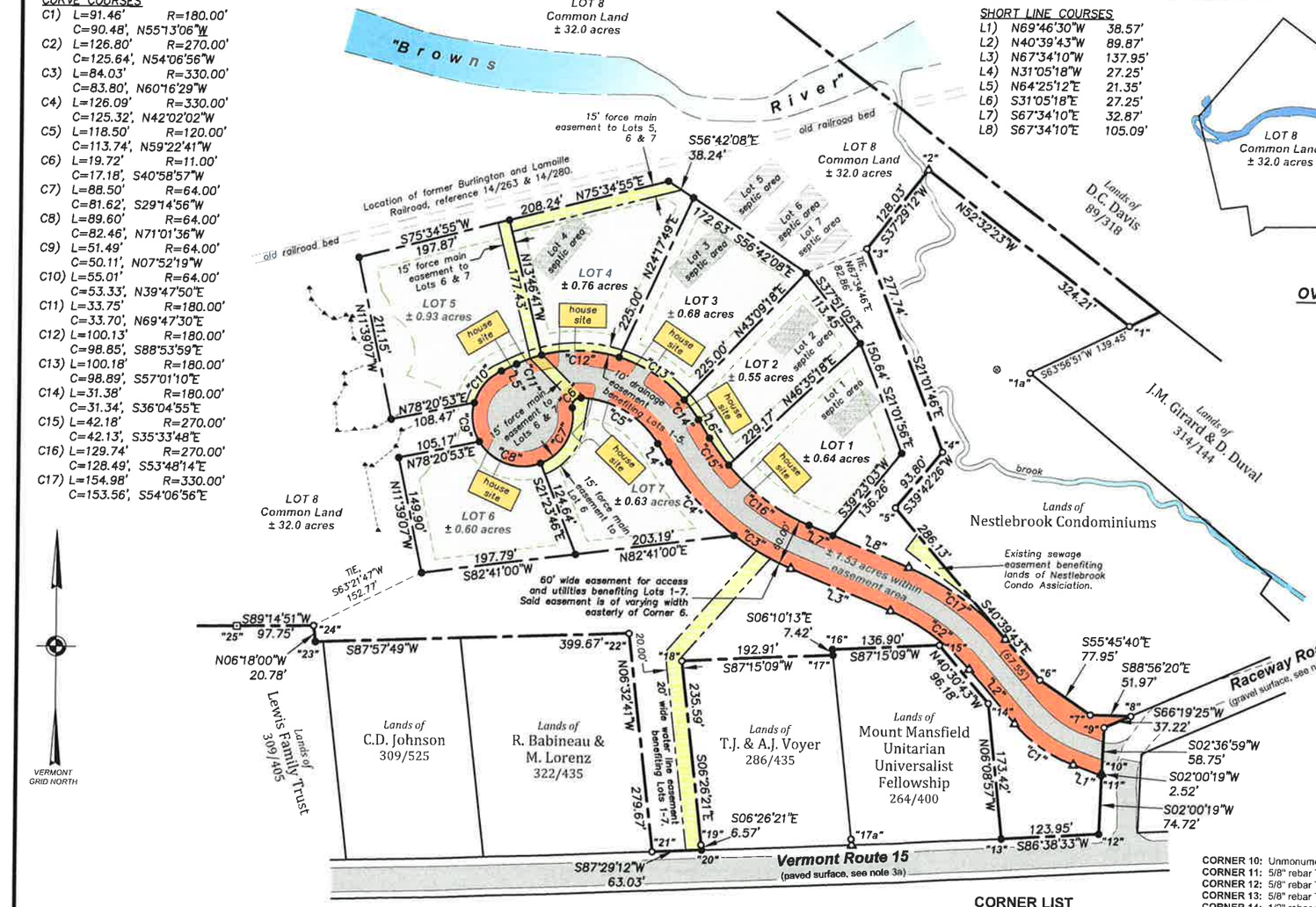
L1)	N69°46'30"W	38.57'
L2)	N40°39'43"W	89.87'
L3)	N67°34'10"W	137.95'
L4)	N31°05'18"W	27.25'
L5)	N64°25'12"E	21.35'
L6)	S31°05'18"E	27.25'
L7)	S67°34'10"E	32.87'
L8)	S67°34'10"E	105.09'



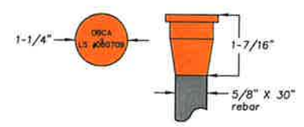
OVERALL PLAN
(not to scale)



Location Plan-n.t.s.



Typical Stamped Caps on Set Monumentation
(not to scale)



SURVEY NOTES

1. The purpose of this survey was to subdivide a portion of lands deeded to the Stephen and Frances Boucher Living Trust in Volume 321, Page 724 of the Town of Jericho Land Records, dated November 1, 2013.
2. The following plats and plans recovered in the Town of Jericho Land Records were used in ald of this survey:
   a. Plat entitled; *"Plat of Survey for Jericho Partnership, Jericho, Vermont"*, prepared by Marcel A. Meilleur, L.S. 504, dated October 28, 1987, last revised February 24, 1988 and is recorded inMap Slide #191 of the Jericho Land Records.
   b. Plat entitled; *"Plat of a Portion of Lands of Maurice Begnoche, Parcel A, Jericho, Vermont"*, prepared by Vaughn C. Button, L.S. 415, dated September, 1985 and is recorded in Map Slide #161 of the Jericho Land Records.
   c. Plan entitled, *"Condominium Site Plan, Jericho Woodlands, Route 15, Jericho, Vermont"*, prepared by Trudell Consulting Engineers, Inc., dated July 17, 1991 and is recorded in Map Slide #224 of the Jericho Land Records.
   d. Plat entitled, *"Map of Boundary Survey. Frances W. Begnoche, R.R. 2, Box 228, Jericho, Vermont 05465, Underhill, Vermont"*, prepared by Steven M. Brooks, L.S. 567, dated August 16, 1993, last revised August 22, 1995 and is recorded in Map Slide #268 of the Jericho Land Records.
   e. Plat entitled; *"Frances Begnoche-Boucher, Subdivision Plan, VT. RTE 15, Jericho, Vermont"*, prepared by William A. Robenstein, L.S. 60, dated February, 2007 and is recorded in Map Slide #355 of the Jericho Land Records.
3. The side lines of Vermont Route 15 and Raceway Road were determined as follows:
   a. Vermont Route 15 was found to be 3 rods (49.5') wide per Proprietors Volume 1, Page 5 of the Jericho Land Records. The sidelines of Vermont Route 15 as depicted hereon were established by existing monumentation recovered on site and the approximate center of the current traveled portion of the highway.
   b. Raceway Road was established at the statutory 3 rod (49.5') wide right of way as allowed under 19 V.S.A. 32. The side lines of Raceway Road as depicted hereon were established from existing monumentation recovered on site along with information taken from surveys of record.
4. The parcel shown hereon may be subject to additional easements and right of ways of record not already noted.
5. Unless otherwise noted, the physical location of underground utilities were not determined by this survey.
6. Bearings are based on Vermont State Plane Coordinate Grid North (NAD83, VT-4400) as derived from Network RTK-GPS observations taken on site December 23, 2015.
7. The information on this plat reflects conditions that were existing at the time of the survey both at the project location and in the land records of the Town of Jericho as of December, 2015 and January, February and May of 2016.

CORNER LIST

NOTE: (O.D.) indicates outside diameter of applicable monument.

CORNER 1: 3/4"(O.D.) metal pipe recovered 1" below grade.
CORNER 1a: 3/4"(O.D.) metal pipe recovered 1" below grade.
CORNER 2: Unmonumented point
CORNER 3: 1"(O.D.) metal pipe recovered 2" above grade.
CORNER 4: 5/8" rebar recovered 6" above grade.
CORNER 5: "Tee-Stake" recovered 18" above grade.
CORNER 6: 1"(O.D.) metal pipe recovered flush with grade.
CORNER 7: 1"(O.D.) metal pipe recovered flush with grade.
CORNER 8: 5/8" rebar recovered flush with grade.
CORNER 9: "Tee-Stake" recovered flush with grade.
CORNER 10: Unmonumented point
CORNER 11: 5/8" rebar TO BE SET
CORNER 12: 5/8" rebar TO BE SET
CORNER 13: 5/8" rebar TO BE SET
CORNER 14: 1/2" rebar recovered 2" below grade.
CORNER 15: 1/2" rebar recovered flush with grade.
CORNER 16: 5/8" rebar TO BE SET
CORNER 17: 5/8" rebar TO BE SET
CORNER 17a: 5/8" rebar recovered 1" below grade.
CORNER 18: 1/2" rebar recovered leaning and was located at it's base.
CORNER 19: 1/2" rebar recovered 3" below grade.
CORNER 20: 5/8" rebar TO BE SET
CORNER 21: 1/2" rebar recovered 2" below grade.
CORNER 22: 1/2" rebar recovered leaning and was located at it's base.
CORNER 23: 5/8" rebar TO BE SET
CORNER 24: 1/2" rebar recovered 1" above grade.
CORNER 25: 10"(O.D.) concrete bound recovered 3" below grade.

LEGEND

- Found Corner Monument (See Corner List) ○ ⊡
- Set Corner Monument (See Corner List) ●
- Unmonumented Point △
- Corner Number (See Corner List) "3"
- Drilled Well ⊙
- Subject Boundary Line
- Subdivision Boundary Line
- Adjoining Boundary Line
- Esement Boundary Line
- Survey Tieline
- Zoning Setback Line
- Wetland Buffer Line
- Approx. Wetland

Approved by the Resolution of the Town of Jericho Development Review Board on the _____ day of _____, 20__, subject to the requirements and conditions of said Resolution Signed this ____ day of ____, ____, 20__.

by _____
Chairman or Clerk

Town of Jericho Clerks Office Received for Record

This ____ day of _____ A.D. 20____, at ____ o'clock ____ minutes ____ M. and filed in _____

_____
Town Clerk

Graphic Scale
100 75 50 25 0 50 100 200 400

PRELIMINARY PLAT NOT FOR RECORDING

Seth W. Kittredge, L.S. 060709

THE INFORMATION ON THIS PLAT IS A COMPILATION AND REVIEW OF PERTINENT LAND RECORD INFORMATION, FIELD MEASUREMENTS, PAROL EVIDENCE AND OTHER STATE AND LOCAL DOCUMENTS. THIS PLAT IS IN ACCORDANCE WITH 27 V.S.A. 1403 AND CURRENT RULES SET FORTH BY THE VERMONT BOARD OF LAND SURVEYORS. THIS PLAT IS ONLY VALID WITH MY ORIGINAL SEAL AND SIGNATURE.

DATE	
SURVEY	OBCA
DESIGN	OBCA
DRAWN	SWK
CHECKED	SWK–DWB
SCALE	1"=100'

REVISION
☐ RECORD DRAWING ☐ PRELIMINARY
☐ FINAL ☐ SKETCH

O'LEARY-BURKE
CIVIL ASSOCIATES, PLC
1 CORPORATE DRIVE, SUITE 1
ESSEX JCT. VT
PHONE 878.9900
FAX 878.9999
E-MAIL obca@olearyburke.com

SUBDIVISION PLAT
PORTION OF LANDS OWNED BY

THE STEPHEN AND FRANCES BOUCHER LIVING TRUST

Vermont Route 15 and Raceway Road
Town of Jericho, County of Chittenden, State of Vermont

DATE	-/-/2016
JOB	2015-81
FILE	2015-81-PLAT
PLAN SHEET #	PL1-OF-1